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APRIL 7, 1949

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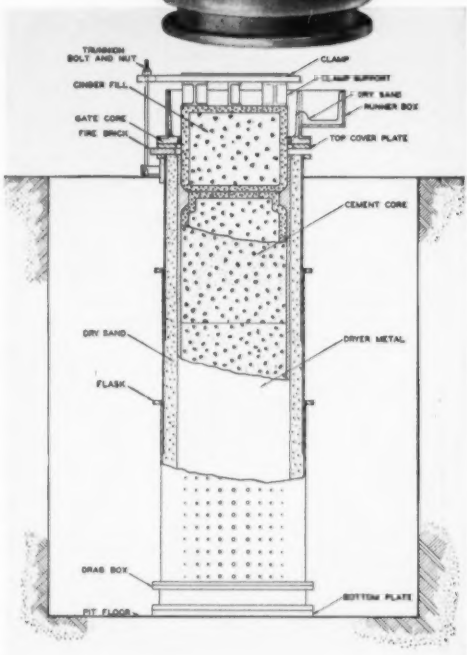

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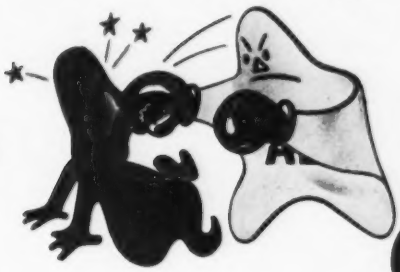

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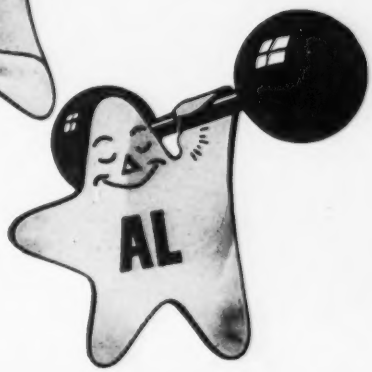

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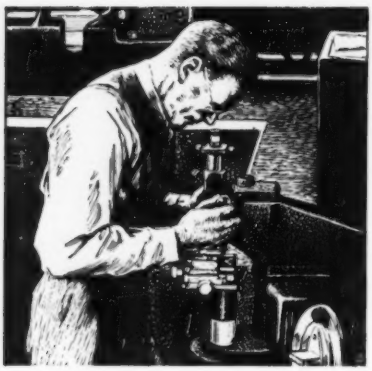

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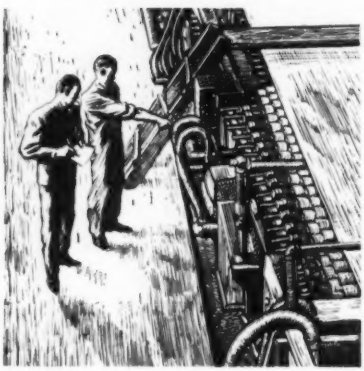

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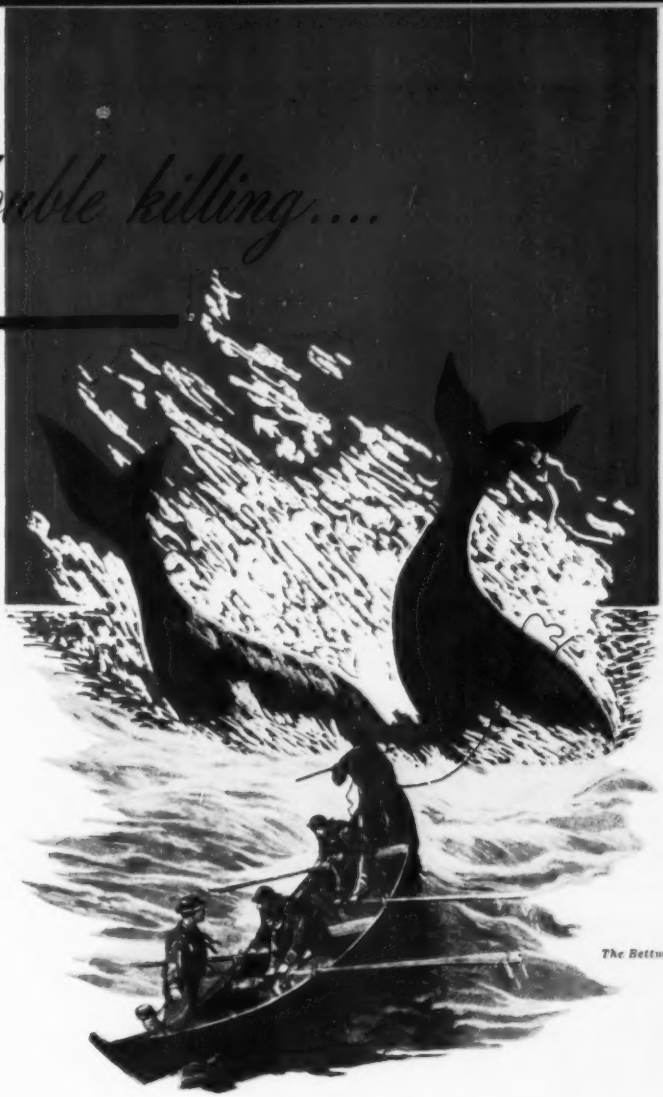

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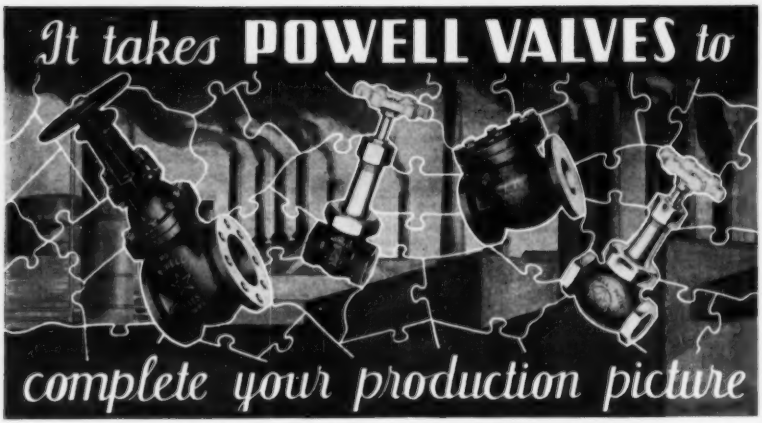

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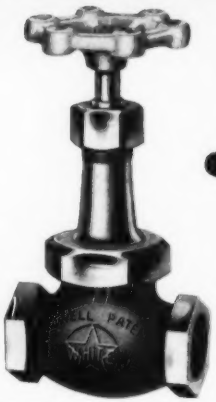

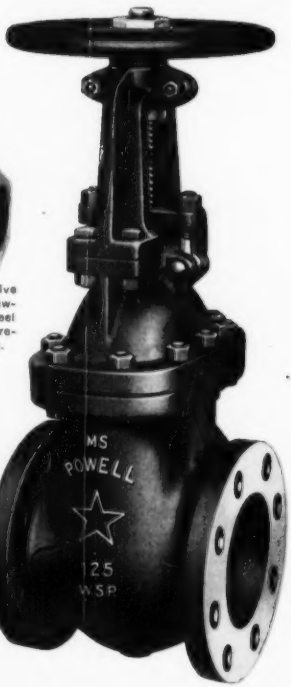

Fig. 1708—200-pound Bronze Globe Valve with screwed ends, union bonnet, renewable, specially heat treated stainless steel seat and regrindable, renewable wear-resisting "Powellium" nickel-bronze disc.

Fig. 560—200-pound Bronze Regrinding Horizontal Swing Check Valve with screwed ends, screwed-on cap and regrindable, renewable bronze disc.

Fig. 500—125-pound Bronze Gate Valve with screwed ends, screwed-in bonnet, inside screw rising stem and tapered solid wedge in sizes ¼" to ¾", inclusive; double wedge in sizes 1" to 3", inclusive.

Fig. 1793—Large 125-pound Iron Body Bronze Mounted Gate Valve. Made in sizes 2" to 30", inclusive. Has outside screw rising stem, bolted flanged yoke and tapered solid wedge. Also available in All Iron for process lines.

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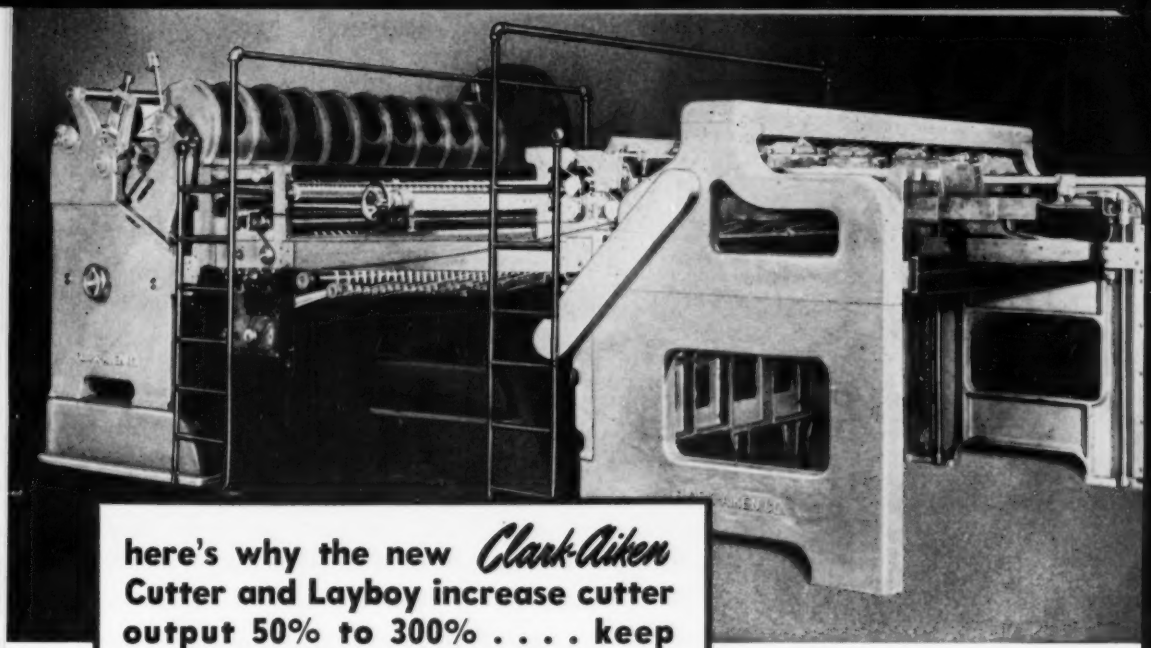

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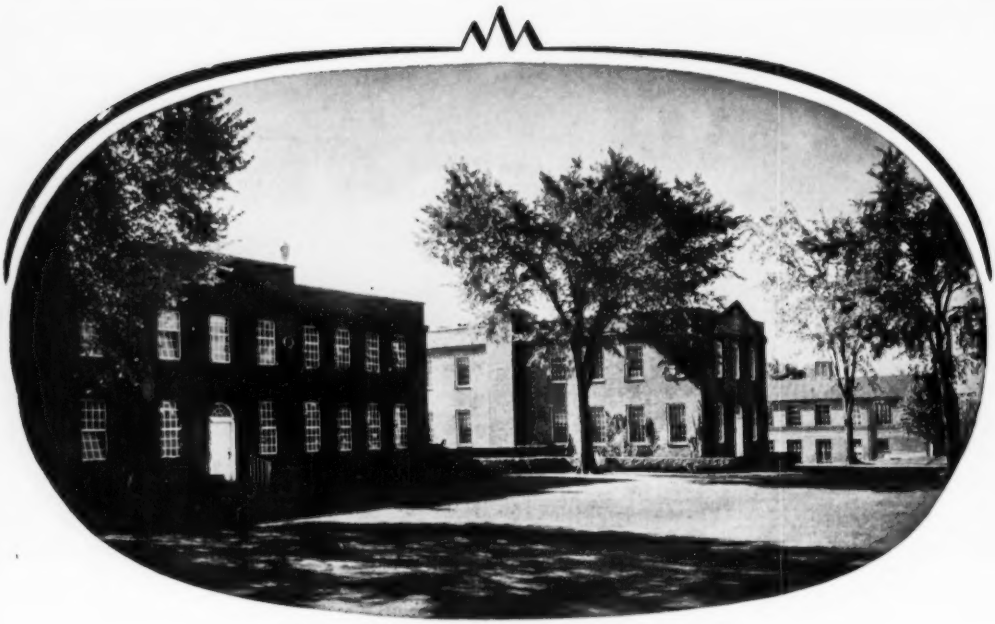

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VOL. 128, NO. 14

FPC Study Favors Holyoke Water Power Co.

WASHINGTON—The Federal Power Commission during the week ending April 2 received an adverse recommendation on the application of the Gas & Electric Department of the City of Holyoke, Mass., to develop Connecticut River hydroelectric power. Instead, the Commission staff which studied the project recommended that a license be authorized for development by the Holyoke Water Power Co., subject to certain conditions.

The adverse report on the city's application came as a complete surprise to industry and others concerned, and if adopted by the Federal Power Commission, means rejection of the city plan in favor of power development by the power company.

The recommendation stated that if Holyoke Water Power Co. is licensed to carry out the project, the license should be conditioned upon maximum utilization of the available facilities for production of power until such time as the redevelopment authorized is accomplished.

The staff recommendations took note of the fact that Holyoke Water Power Co. and the industrial concerns interested in the matter had repeatedly urged that a decision be made as soon as possible, by the Commission.

These findings were summarized for the Commission by Willard W. Gatchell, assistant general counsel of the FPC, who commented that "the staff was very much surprised at the proposal" of the city gas and electric department to abandon the canal system and to construct conduits through which water would be taken to plants now taking water from the canals.

"The water power company has applied for a project which is substantially identical with the plan of redevelopment which in the opinion of the engineering staff witness is best adapted to a comprehensive plan of re-development," said Mr. Gatchell.

"The other proposal by the department, in the opinion of the engineering staff, is not economically feasible and therefore, should not be approved, if the Commission is in agreement with the engineering conclusion."

This was the situation when hearings were recently suspended at Holyoke—the power company had not only submitted a plan which was substantially in accord with the views of the Commission engineers, but had accepted suggestions for modifications which would bring it still closer to the engineers' approach. On the other hand, Mr. Gatchell revealed to the Commission, the city department refused to accept Commission staff suggestions "and," said Mr. Gatchell, "presented a plan which in the staff's view is not economically feasible."

Hearings were resumed March 28, and the staff report followed. Among other matters, the Commission staff discussed in detai the question of water used by the individual consuming industries. Mr. Gatchell commented;

"In view of the interests of the upstream and downstream communities, we call attention again to the fact that it is not proposed to raise the elevation of the power pool at this time above what it is at present.

"Undoubtedly such proposal will be made when economic conditions justify increasing the power installation, and when the proposal is made there should be a full hearing to determine what effects will be on upstream communities."

Further on, Mr. Gatchell reported; "At no time have any of the industrial concerns which intervented requested authority through a license under the Federal Power Act to continue the diversion and use of water for production of power."

"All of the engineers who discussed present water use agreed that a larger amount of capacity and energy could be produced if the water was routed to the most efficient plants first, and so on in order of efficiency until all of the available water was being used as fully as possible with available machinery.

"This cannot be done under the laws of the Commonwealth of Massachusetts because of the indenture agreements through which these industrial concerns obtain the water in an order of priority which differs from the order of efficiency."

However, the staff recommendations held that the Commission has full authority in the matter.

PETER M. HARTIG

—manager of the Mediterranean and European divisions of the Walker-Goulard-Plehn Co., will sail on the Mauretania on April 8 for a four- or five-month business visit to Iran, Iraq, Lebanon, Syria, Israel and Greece with American specialty papers. . . . Discussing his trip with Paper Trade Journal, Mr. Hartig said that his firm in the last decades has introduced many American branded paper grades in the Middle-East, among them being Hammermill bond and safety check papers and some of the higher grades made by the Gilbert Paper Co. "I am optimistic about the future of these papers, which are now well-established and quite popular with consumers in some of the Middle-East countries, who somehow still are able, despite the difficult currency situation, to arrange for the necessary import licenses on such specialty papers", he added.

Everest, Tinker Brief NPTA on Paper Status

Ramaker Succeeds Luff as President; W. G. Leathers Named Executive Secretary

NEW YORK — L. A. Ramaker was elected president of the National Paper Trade Ass'n., succeeding Ralph G. Luff, at the annual meetng of that group at Hotel Waldorf-Astoria, April 4-6; L. S. Pollock was re-elected vice-president in charge of the wrapping paper division, and E. P. Magel was elected vice-president in charge of the fine paper division, succeeding Mr. Ramaker. Mr. Luff automatically became a member of the Advisory Council, composed of past presidents. At the same time, W. G. Leathers was named executive secretary of the Association, succeeding A. H. Chamberlain, who was advanced to the newly created post of assistant to the president.

Mr. Ramaker is president of the Bouer Paper Co., Milwaukee; Mr. Luff, president of the D. L. Ward Co., Philadelphia; Mr. Pollock, president of the Pollock Paper & Box Co., Dallas; and Mr. Magel, president of the Crescent Paper Co., Indianapolis.

Registration at the convention ran well in excess of 800 and more than 500 persons attended the annual luncheon on April 4, when Mr. Chamberlain was presented with a silver plaque on which were engraved the names of the Association's past presidents, "all of whom," as Mr. Chamberlain pointed out in his speech of acceptance of the plaque and of his new post, "are still living." Mr. Chamberlain had been executive secretary for 22 years.

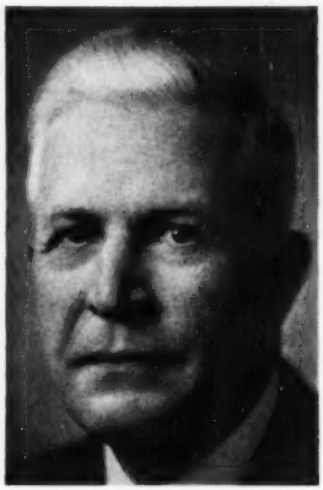
Featured speakers at the Open Industry Session on April 5 were D. C. Everest, president of the Marathon Corp.; E. W. Tinker, executive secretary of the American Paper & Pulp Ass'n.; and R. S. Alexander, professor of marketing, Columbia University, School of Business, whose topic was "Wholesaling in a Buyers' Market."

Mr. Everest said in part:

Ten years ago I had the pleasure of speaking to a meeting of your Association in Chicago. If you will recall, 1939 was rather a hectic year following the apparent slump in business in 1938. Everyone was jittery and no one seemed to know what was happening or in what direction we were headed . . . While we always seem, in every business, to be preparing for disaster in this country, analysis shows that over a period of 35 years the consumption of goods, which is the basis of all business, has been on the increase at least 85 percent of the time.

The charts I prepared last December, showing the growth of the paper and paperboard industry from 1900 to 1048, inclusive, with which many of you are familiar, and the talk I made to the Sulphite Paper Manufacturers at their meeting in February, seem to have stirred up considerable comment, both favorable and unfavorable. If this presentation has done nothing else, it has at least made people, not only in the industry, but also economists, bankers, investors, and others, think about the industry.

Heretofore, both you as distributors and the mills as primary producers have apparently done



L. A. RAMAKER
President

too good a job in taking care of the requirements of all consumers of paper, paperboard, and paper products. Purchasing agents pushed bells and presto—their requirements were taken care of promptly and efficiently. War interrupted that procedure and people were forced to pay more attention to their requirements in the paper field.

While the paper industry is the sixth largest in the country, it is only beginning to get the recognition as to essentiality which it deserves. Again, I want to emphasize what I have said over and over again; *there is no economic substitute for paper in 99 percent of its uses.* If that is not a sound basis for the establishment of any industry, then Adam Smith wasted a lot of time writing books back in the 1700's.

What I predicted in 1939 I now find was far short of what developed at and following that time. In 1939 I said:

"Paper consumption has reached new high levels, more paper is constantly being required for new uses and old uses are demanding greater volume. Under war pressure both diversification and volume of use are bound to grow. Our overall production this year has run approximately at the rate of 13,000,000 tons a year. This is likely to be our biggest production year; this would in all probability have been true even had there been no abnormal war stimulation.

"Insofar as paper is concerned, there is ample production capacity to take care of any anticipated real consumption. At the operating rates of the year to date, well over 2,000,000 tons of capacity is idle. We have a reasonably safe margin between consumption and capacity."

I made that statement in September 1939, shortly after war was declared in Europe. At that time I was estimating that the industry was producing at the rate of 13,000,000 tons and, mind you, that covered the first three months of the year which then was still reflecting the slump of 1938, a situation quite analogous to the one we have now.

When 1939 ended it was found that consumption, which included importations of newsprint and other papers from Canada and Europe, was 15.9 million tons (only 200,000 tons under the then all time high level of consumption of 16,000,000 million tons established in 1937).

As I tried to point out to the manufacturers at the recent 1949 APPA Convention in February, people do not seem to realize what happened in the paper and paperboard industry within the short space of ten years. Briefly, it is this: Consumption was 15.9 million tons in 1939 but in 1948 it reached a new all time high of 26.1 million tons (nearly 10 million tons increase in ten years).

If you want to analyze the real rate or trend of increase, eliminate the four years 1942 to 1945, inclusive, during which new uses and extended old uses were under strict war controls. Within the three years following the lifting of controls consumption has stepped up from 19.7 million tons in 1945 to 26.1 million tons in 1948.

Some persons will argue that much of the tonnage produced today is non-essential. However, everyone who buys paper thinks he has a good reason to use every pound he purchases; otherwise, he would not buy it, nor would he buy paper and paperboard if there was anything else available which he could buy cheaper and still get the service he expects. The amount of non-essential tonnage in relation to the total tonnage consumed is about as discernible as a flyspeck in a pepper box.

Within the ten years I have been discussing you have acquired 16 million new customers. All of them have been brought up in a country where the use of paper and paper products is a part of our economic set-up and is greater than in any other country in the world. At the end of 1939 the population of the United States was 131 million and at the end of last December it was 147 million. This 16 million increase is one and one-third times the entire population of Canada; one and one-seventh times the entire combined populations of Finland, Norway, and Sweden. Knowing this, why is so much emphasis placed on comparison with conditions existing in 1918 or 1945?

Since the circulation of the chart I have referred to, many persons have asked me why I did not chart the national income on the basis of "disposable income" or "real dollars income." I found there were almost as many ideas as to what is meant by these two suggested types of income as there were persons with whom I discussed it. I tried to explain that I was not attempting to hazard guesses on either "dollar sales" or "dollars profits" and that I was only dealing with "units."

Two of my friends have revised the chart to show "disposable income" for the same period. Disposable income is defined as the purchasing power of individuals; that is, the income available to individuals after payment of personal income taxes and as compiled and published by the U. S. Department of Commerce.

They have come up with the conclusion that the curves are almost identical by the two methods up to 1938, but following that time they believe their curve to be more representative of actual gearing of income to consumption due to war controls and taxation. Regardless of how you figure it or tie it in with any national income factor, the fact remains that for three consecutive uncontrolled years consumption per capita

has gone from 319 pounds in 1946 to 342 pounds in 1947 and 357 pounds in 1948. Suppose 1949 does drop back to the 1947 rate of consumption per capita, you would still have 342 pounds times 147 millian persons or a total consumption of 25,137,000 tons, which would still be 537,000 tons more than the consumption in 1947. I take it 1947 was not such a bad year for you, all things considered.

People who make capital investments take a chance on the future and tie-up large sums of money in doing so, but when it comes to the daily handling of sales and operations they are continuously seeing "ghosts undre beds."

No one on earth knows more about the reason for the falling off in the placement of business in the paper industry than you gentlement. I don't blame people for doing what they could to get rid of the rag-shags and bobtails they had accumulated over seven or eight of the greatest "substitution years" we have ever experienced. It was both smart and a healthy thing to do, but as long as everybody knew what the other fellow was trying to do, why get so excited about it?

With labor making up practically 70 percent or more of the cost of all goods and with much of the balance of cost fixed either by law or some natural law, except for black-market prices, there is not going to be any precipitate drop in the price of goods until the item of labor goes down. This is not going to happen immediately or in the foreseeable future.

Nearly everyone who talks about inventories thinks only in terms of dollars and not in units or in days" operations. Those who make these comparisons overestimte the effect of inventory liquidation. It simply means that the cycles between buying and not buying are shortened. This is evidenced by the fact that while this hullabaloo about cessation of buying began only last fall, you now find that every order placed is for delivery day-before yesterday and that sometimes you receive telephone calls about shipment even before the order has been received and processed.

For a quick, accurate survey of the outlook for 1949, I know of no better place to go than to the Ass'n., of National Advertisers, which represents both large and small business advertising on a nation-wide basis. These fellows are pretty keen and they are gambling considerable sums of money to maintain and increase their own individual businesses. Their surveys are right up-to-the-minute and their comparisons are with 1948; and not with the time when Hannibal crossed the Alps.

Their survey dated March 18, 1949, shows that on business volume *today* compared with 1948, twenty-two companies doing a business of less than $50 million annually report that 14 percent are better, 50 percent equal, and 38 percent less. In 32 companies doing a business of over $50 million annually, 44 percent are better, 38 percent equal, and 18 percent less.

On *expected sales volume* for 1949 versus 1948, the 22 companies doing business of less than $50 million estimate an increase of 18 percent, equal performance 50 percent, less than 1948—32 percent. In 31 companies doing a business in excess of $50 million the estimates are: up 45 percent, equal 42 percent, less 13 percent.

In their survey of advertising expenditures to date this year shows that of the smaller companies 19 percent have cut, whereas only 9 percent of the larger one have done so. In advertising expectations for the year, however, the 22 smaller companies estimate increased expenditures 46 percent, same 36 percent, less 18 percent, whereas the 32 larger companies estimate increases 56 percent, equal 31 percent, and less only 13 percent.

In the consumer goods business, 40 companies doing less than $50 million volume show that to date this year volume is up 33 percent, equal 40 percent, and less 27 percent. Thirty-four companies doing more than $50 million show: up 21 percent, same 47 percent, less 32 percent. In their estimates for the full year 1949 versus 1948, they show 48 smaller companies: up 33 percent, equal 45 percent, less 22 percent. On the 33 larger companies they show expected sales volume: up 36 percent, equal 40 percent, less 24 percent. Certainly this is not a gloomy outlook when you consider the equal or increased percentage increases for 1949.

In the matter of advertising thus far this year, the 40 smaller companies cut 13 percent and the 34 larger companies cut nine percent. When you consider that clearance sales of consumer goods were put on in December rather than January this is not a bad prospect.

When it comes to estimates of advertising expenditures for the year, the 40 smaller companies show: increase 53 percent, equal 27 percent, less 20 percent. On the 34 larger companies, they show: more 47 percent, same 44 percent, less 9 percent.

Illustrative of how national advertisers have learned the truth of the statement "Advertising Pays," I note that while one concern selling industrial goods anticipates a decrease in volume of 50 to 70 percent, it is increasing its advertising budget 40 percent. Such action is good, sound business sense and shows someone is alive to doing a selling job rather than sitting around allotting merchandise. As to the advertising effect on our industry, judging from all the newspaper notoriety on the war between networks, it is reasonable to assume that paper use may increase and that radio appropriations may decline.

Despite the fact that everyone was griping about liquidation of inventories on the part of merchants and consumers, the chaotic condition which seemed to exist in foreign and domestic pulp prices, the sniping going on between container manufacturers, and all the other things which delight the boom-and-bust boys, it is evident that some evidence of sanity is emerging and also some confirmation of what I was trying to say in February.

If you are to reverse a trend, you have got to stop somewhere. You can't go up until you stop going down. That is the period we have just passed through. I am not foolish enough to say that this applies to every specific grade, but it does apply to every tonnage item. I know that in my business, which involves a multitude of converted products, there has been a definite increase in the placement of orders and all of these for immediate shipment plus. I have also had opportunity to discuss this matter with many other manufacturers and they all agree that there is a different tone to the market.

RALPH G. LUFF
Retiring President

There seems to be a strange psychology in this country today. Everyone contends that prices should be lower and the moment they are lowered, some Congressional committee is appointed to investigate why prices declined. We certainly have a magnificent display of "checks and balances" or some other fool theory which constantly interrupts the more sensible application of the old *fundamental* law of supply and demand.

As far as all the work of the commentators and feature writers is concerned, I would like to point out that the sale of newspapers and the interest in news broadcasts by radio commentators is entirely dependent on "a continued story" basis. When things are on the rosy side, no one buys many papers or listens intently for news broadcasts and commentators' comments. Both agencies depend on impending calamities to sustain interest and sales. Therefore, these agencies harp on unemployment, lower prices, or anything else which might create dissatisfaction in the minds of their readers or listeners. As soon as the American public thinks any situation is on the up-grade, they decide that everything is okay and dismiss it from their minds. Appraise what you read and hear on the basis of well-established facts and you won't have so many occasions for high blood pressure performances and life will really be a bit easier.

In your own business, which is bound to be hit by any general inventory liquidation, your reports show that there is not any great need for concern. If you did need a housecleaning of stuff you accumulated over an eight-year period, you should have pretty well accomplished that objective.

In your reports you deal with dollar volume and in Fine papers that is off a little over 13 percent for the first two months of 1949, as against 1948. In the Wrapping Paper Division your dollars sales are also off 13 percent under last year. It is unfortunate that there is no way to tell what this means in unit volume. How many fewer square feet of paper or pieces of converted products does it mean? You are the only ones who can find out about that by the comparison of prices per pound on paper or per thousand on converted articles as against 1948.

Dollars sales in changing price markets does not indicate much. The whole thing is how many pieces of printed matter will result from your sales of Fine Paper and how many things you will package or wrap up from your sales of Wrapping Papers and other articles.

We are passing through a period of minor adjustment which may have been overdue, but it certainly is not a forerunner of a serious one, unless everyone is determined to make it so, come hell or high water.

Even Fine Paper manufacturers, who have probably had more occasion to gripe about business than anyone else, now state that placement of business has picked up considerably during March.

Reviewing all that has happened since 1945, and even what happened from 1940 to the present time, I cannot conceive how there can be any long-sustained lack of demand for the products of this industry. Having been associated in a minor way with the Baruch Committee in 1917, and later in a more important way with the Stettinius Committee in 1940-41, and now as a member of a Task Force under the National Security Resources Board, I think I am able to foresee the import of a program and its possible import on an industry and on the whole domestic economy. Again, I do not presume to be an infallible predictor, but if my assumptions

W. A. LEATHERS
Executive Secretary

ARTHUR H. CHAMBERLAIN
Assistant to the President

are right this country is faced with the worst manpower shortage we have ever experienced. Continuous pressure for shorter work weeks will not help this situation.

During the past three years the paper industry has pushed all its plants to capacity, has added more capacity and has finally in 1948 pretty well finished refilling inventories that were sadly depleted during the war. We no longer have the job of refilling pipelines to do, but we still have a consumption of paper that is at least 75 percent higher than prewar. Consumption will be maintained at a high level because the current income of the people is high. Income will be maintained at a high level unless increased taxation develops. There are farm support prices which are available to maintain farm incomes. Exports will continue high, construction and non-durable goods production will be high and the Social Security program will maintain income for those who become unemployed, the overall decreases in living costs help to ease the whole situation.

The money market is easy and there is no money squeeze. The rediscount rate of the Federal Reserve Banks remains at the extremely low level of 1½ percent.

The general price level as evidenced by the Bureau of Labor Statistics indexes has levelled off with farm prices down closer to the prices for manufactured goods, thus easing one of the serious distortions that faced us a year ago. Now the farmer, worker, dairyman and the manufacturer can do business on a more equitable and stable basis.

A so-called buyers' market and increased competition do not mean deflation. The readjustment to a buy-and-sell market is well along in the paper industry. Overall inventories in units are low both at paper mills and in the hands of consumers and paper merchants.

Stocks of paper on hand at paper mills are less than half what they were in 1937. Available information indicates that inventories of paper in the hands of consumers are reasonable and in line with consumption which is running at close-to-maximum levels.

Fine Paper production is running less than consumption and there is a possibility of a squeeze if inventories are drawn down further. In Printing Papers supply and demand are about in balance at present levels. In Coarse Papers and Tissue Papers, unshipped orders at mills were in a normal healthy condition. True competition has returned and is welcome.

There is only one fly in the ointment on this proposition of supplying demand in every line. That is the industry's ability to produce a sufficient amount despite the increased capacity which has come into production. It is well recognized that existent equipment has been worked to the limit without any breathing spell for making proper repairs and replacements. Many farsighted concerns have done this, but there is still much to be done and with the delivery of repairs and equipment such as it is, it takes more time and consequent loss of production to complete these repairs and replacement jobs. It is possible that before the year ends the mills will not be able to meet the demand with deliveries in accordance with the purchasers' wishes.

Following my talk to the manufacturers in February, some of my friends told me that some people in the industry said "Everest is playing the same old record but using a new needle." They are probably right, but I wouldn't change the record one bit, so long as I have a good recording and the record is still in accordance with the facts as they have developed over a period of years.

Sure, I put on a "new needle" and I think that is just what this industry and every other industry needs. They *need* "needling!" With all the messed up performance of the past ten years, people have grown flabby. The "allocation scheme" was a great boon to salesmen who wanted to "get-even" with some purchasing agents for some fancied grievances they had in the past. Now salesmen have to get out and patch up their fences and really use a little gray matter and physical effort. Gosh, how they hate it! They have become allergic to work. If you find a snooty purchasing agent who is beginning to feel his oats, it is always easy to get him down to earth by mildly inquiring what the sales force of the concern he represents is doing in relation to its customers.

When the consumer can't use as much as we can produce and distribute, let's recognize the fact and not try to put more water in a glass than it will hold. If we have the courage of our convictions that someday the consumer will need more than we can readily supply, let's hold that reserve in inventory to the limit of our financial ability until it is required.

Keep your price structures in decent and equitable relationship to costs. When you know there is no opportunity to materially reduce costs, and *there is none* in view of labor costs and probable increased taxation, any monkeying around with unreasonable price reductions is dangerous and the whole price structure can slide down faster than an old wool sock on a bony leg. It doesn't make sense, but ill-considered individual action can upset an industry tremendously.

I know I am sticking my neck out and particularly in view of the fact that one-quarter of the year is already history, but I still feel that the consumption of paper and paperboard for 1949 will be at or very near the 1948 level, depending on the ability of the United States and Canada physically to meet the demand.

E. W. Tinker

Backgrounding Mr. Everest's comments, and developing a number of additional points, Mr. Tinker said in part:

If the American Paper & Pulp Ass'n. and the National Paper Trade Ass'n. can bring about, within their respective segments of the industry, intelligent consideration of economic conditions within and surrounding the industry, they will contribute in a great degree to the industries themselves and to the public welfare.

There are two particular phases of the present situation that I would like to discuss with you. Last year during your meeting, Mr. Parker and I appeared on your program with Mr. Leo Cherne. I have a vivid recollection of Mr. Cherne's reaction to statements made by both Mr. Parker and by me to the effect that we were approaching a balanced supply-and-demand situation, and would reach this desirable objective shortly, providing we could avoid artificially stimulated crises. Mr. Cherne took exception to the reference to artificially stimulated crises and then proceeded to draw a picture of an imminent international conflict that left me, at least, in a very depressed frame of mind. That was a year ago and the situation has somewhat adjusted itself since that time. Mr. Cherne typified, in a somewhat exaggerated degree to be sure, a rather general belief then prevalent to the effect that the inflationary spiral was almost bound to continue upward for an indefinite period. By contrast, Mr. Parker saw clearly, and said so last year, that inflation in this country was then on its last legs.

This year we have an opposite general belief that we are "all going to hell in a basket" and this one Clark Everest has just countered so ably. I suggest to you that these events prove the general high quality of leadership in our industry. If the APPA and its Divisions can, through dissemination of factual information, provide the basis for clear thinking and sound evaluation of current conditions and future trends, an extremely useful purpose will have been served.

An important phase of the present situation relates to paper values. In considering the future as related to paper values, let us review some known factors.

There is much question but that the paper industry is now in the position to produce what might be termed "an adequate supply." Sufficient new capacity has been installed, as was to be expected, to bring production up to obvious public requirements. This, in most grades, has resulted in a balance between supply and demand. To bring this about required the expenditure, on the part of the manufacturers, of one and one-half billion dollars in plant investment. This action within the pulp and paper industry effectively contradicts the contentions of some of our socialistically-minded friends, particularly those in public life, that government assistance

and control is necessary if the public needs are to be met. To the extent that this new capacity has enabled the industry to get off of a basis predicated upon the allocation of output, I presume the membership of the NPTA gives some recognition to the industry's achievements.

It will be helpful if we view realistically the index of average value per ton of paper as compared with the all commodity price index, as compiled by the Bureau of Labor Statistics.

Using 1939 as an average of 100 percent, the June index of average value per ton for paper was, in 1940, 107.2 and the all commodity index 100.5. In 1941, for paper, 113.2; all commodities 113. In 1942, 122.9, compared with 127.9. In 1943, 126.8, compared with 134.6. In 1944 the average value per ton for paper stood at 130.7 and the all commodity price index at 135.3. In 1945, 136.5 as compared with 137.6. In 1946, 148.3, as related to 146.4. In 1947, 198.6 as related to 192.0 and in 1948, the index of average value per ton for paper stood at 208.5 and the all commodity price index at 215.6.

As you probably will recall, the relationship of the average value per ton for paper in 1940, as compared with the all-commodity price index, represents nothing more than a reflection of reckless statements that were made at that time, covering total paper demand, which statements emanated from novitiates in the newly organized Office of Production Management. The subsequent effects of this situation were felt in 1942 and 1943 and represent a situation that was not healthful to the National Defense program or to the industries involved.

I would like to refer you in particular to the relationship in June 1948. With an all-commodity price index of 215.6 and an index of average value per ton for paper of 208.5, it is obvious that if the normal historical relationship between these two factors is not to be destroyed, there will be a closing rather than a widening of the gap between the two. It seems to me that there are several basic reasons for this.

Let us look at the cost picture in the manufacturing enterprise in the paper industry. Within the last 30 days we have been involved in the consideration of several instances of increases in costs that in the final analysis must be reflected in the price of the end-product.

(1) In presenting the pulp and paper industry's viewpoint with respect to the application of the railroads for another increase in freight rates, it was pointed out that it would be extremely difficult to pass these increases in costs on to the industry's customers because increased price would result in diminished usage. However, the carriers themselves are faced with tremendous new burdens in the form of increased wages that may justify the Interstate Commerce Commission, in its wisdom, in granting at least a part of the increase applied for. This is a cost element that bears heavily upon the manufacturer of pulp and paper.

(2) We are now involved in the consideration of proposals under the Social Security Act that will make the purchaser of a product responsible for Social Security payments on behalf of independent contractors. The impact of this provision up on the costs of pulpwood will be terrific if the provision is effectuated, probably in the long run resulting in elimination of a large part of the contractual system that has been traditional in this phase of the manufacturing enterprise.

(3) As far as I know, there is no justification for anticipation of a reduction in taxes. In fact there is a very real threat of an increase, regardless of the impact that such action would have upon the entire economy of the country.

(4) I do not think I need to amplify the potentiality of the situation that would be created if, as a result of recent court decisions, the ability to absorb freight is denied manufacturers. In our analysis of this situation and its presentation before the Senatorial Committees concerned with the problem, the conclusion was drawn that it would lessen rather than increase competition and would necessitate a radical change in the whole distribution system in the pulp and paper industry.

With every desire to be realistic, and with full appreciation of present-day trends, it is difficult to see any substantial downward trend in the values of paper. Certainly the situation is such that this would mean economic suicide for many units in the industry whose cost picture is not such as to leave a margin.

The spending program that has been outlined and placed before Congress will, if effectuated, inevitably lead to socialization of industry in this country. This situation is not unique to the pulp and paper industry; it applies to all industry and I have no doubt that procurement officers may be able to take advantage of temporary situations that will have been engendered, in part at least, by this very element of fear.

I suggest to you, as you consider the outlook, that you reflect upon the basic economic factors that must in the final analysis determine the value of paper, and that includes the situation with respect to cost-price relationships.

No doubt some of you are reflecting upon the fact that European pulp suppliers have already lowered wood pulp prices in this market. This reduction in prices as published merely brings the European suppliers substantially closer the the published prices of the American producers after a long period of shortages during which European suppliers were able to take advantage of a situation, during which their published princes were substantially higher than domestic prices. Last year, European pulp imported represented less than five percent of the total volume of pulp consumed. Market pulp was about 25 percent of the total consumed and European pulp was but 20 percent of that 25 percent. I make this statement, not intending any disparagement at all of the suppliers of European pulp to this market, but merely to get the facts before you. It is a mattter of public record that the Non-integrated paper mills in the industry last year averaged a lew net return on their sales and on their investments. To make the operation of these mills economic they must have a wider margin of profit, which can only be obtained through a reduction in costs, or an increase in the value of their product.

Newspaper and magazine publishers, in presenting their case recently in opposition to a tremendous increase in postal rates, took the position that to increase the price of their subscriptions and individual sales, as well as their advertising, would really result in a loss of business because the public was not in a mood to absorb any further increases. I expect this is true and the publishers, just as the manufacturers of pulp and paper, are caught in at least a temporary economic squeeze, due to factors over which they have no control. It is possible that this economic squeeze may cause some casualty and these casualties, because the mills involved are suppliers of yours, will certainly not be in your interest.

The prosperity of the industry—and you are a part of it—will vary with our economic cycles. However, the potential demand for the industry's product is enormous. Let me say that I agree with Mr. Everest's view with respect to the long-time position of the pulp and paper industry. There is no commodity manufactured in this land of ours that has a better economic future than paper and paperboard. The growth in capacity of the industry has just about kept pace with the normal growth in demand and while the demand will expand, at varying speeds, depending upon economic conditions, it still will expand over a period of years. It is probably not possible

LAWRENCE S. POLLOCK
Vice-President Wrapping Paper Div.

to measure with a sliderule the increase in our educational and sanitation standards, but we still have a long way to go to reach an acceptable national level and it is this level that is reflected in increased consumption of paper and paper products. It is the industry's responsibility to see to it that its products are of such quality and at such prices that public use will not be curtailed. In part this is your responsibility. A sound conservative program is essential. Further than that, increased efficiency and better techniques are necessary if paper is always to be plentiful and reasonably priced. Increasing efficiency and the utilizatin of better techniques, in manufacture and distribution will necessarily cause hardships within the industry. However, they are inevitable and necessary in the national welfare because paper is so vital to our standards of living and to our national progress.

Paper products are constantly occupying new fields of usage. They can only do this on the basis of their quality and on the basis of competitive price. In this connection the industry is doing every thing in its power to hold increasing cost elements within reasonable bounds.

L. A. Ramaker

At the Fine Paper Division meeting, April 5, Mr. Ramaker said in part:

During the past several years we have endeavored to think and act wisely in the conduct of our business and for the most part a pretty fair job has been done. However, we have made some mistakes and were inclined to take the easy road. Business was good, sales were high, and profits were practically assured. So why be too concerned about what we thought was the other fellow's job?

Conditions have changed a great deal since we met in New York a year ago, and, to our surprise, it is later than we think. Something must be done about the high costs of operating our business, and may I also say, high cost of Government expense. We are convinced now that something must be done to correct that which we might have avoided to some extent had we taken a greater interest in Government, together with the affairs of our own business.

At the opening luncheon of this convention

(Continued on page 62)

Woodlands Section CPPA Meets

Montreal—Record-smashing attendance marked the meeting here of the Woodlands Section of the Canadian Pulp & Paper Ass'n., March 23-24. F. L. Mitchell, manager of the Association pointed out that the three main themes of the meeting were mechanization, adequate training of men and silviculture. He complimented the delegates on their work in the first two fields, and suggested that their silvicultural work should be extended by developing and increasing their knowledge of how to grow more cellulose, or pulp, per acre—an approach differing from merely increasing the growth of trees.

Cellulose growth in Canada in the tree species now being used, Mr. Mitchell stated, was very much slower than growth in more temperate climes, and indicated that steps have been taken by some of the companies to introduce new species which would produce more pulp per acre. He emphasized the need for further work of this character.

A trainng program for present and prospective foremen of the Spruce Falls Power & Paper Co., Ltd., in logging and camp management methods was outlined by D. Dyer of the company's woodlands department, Kapuskasing, Ont.

The camp foreman in a company-operated camp is the key figure responsible for getting the pulpwood crop on its way to the mill, said Mr. Dyer. Prior to the war foremen served apprenticeships of three to four years. Today, trainees are started with a four-months course. A training syllabus has been prepared and is strictly adhered to. Trainees make an actual reconnaissance of the forests to plan cutting and lay-outs of roads. They study accounting procedures, fire fighting methods, logging, use of mechanical equipment and other features of woods operations. At the end of the course, the trainees prepare a paper on their work and these are discussed. Such a course is not inexpensive, said Mr. Dyer, but his company has found it a worthwhile project.

W. A. E. Pepler, manager, woodlands section, CPPA in a paper prepared jointly with B. J. McColl, mechanical engineer of the section, said the Canadian pulp and paper industry has a tremendous responsibility both to itself and the general well being of Canada in reducing the cost of its principal raw material, pulpwood, thereby assuring itself through lower manufacturing costs of stable markets for its products.

Outlining mechanization of pulpwood logging operations, Mr. Pepler said that it offers a demonstrated means of effecting cost reduction in the industry's woods operations. Successful mechanization will be slow to mature, but, he declared, its fulfillment can assure more stable production of the industry, especially in eastern Canada.

A report on the use of the mechanical saw in cutting pulpwood prepared by Messrs. Hidola Levesque and G. E. La Mothe of Price Brothers & Co., was presented by Mr. La Mothe; a report on the feasibility of a Caterpillar DW-10 wheel type tractor in hauling sleighs of pulpwood over snow and iced roads was presented by A. D. Williscroft of the Just Equipment & Supply Co., Montreal, and trends in costs of hauling pulpwood by truck were outlined by B. J. McColl, the section's mechanical engineer.

M. R. Wilson, supervisor of industrial relations, woodlands department, Canadian International Paper Co., Montreal, discussing the role of the camp clerk in the management of woods labour, pointed out that a camp clerk may be the company's only representative in a camp and therefore he should be schooled in sound personnel relations. "The camp clerk is generally the first person to greet the new woodsworker and the last to see him leave camp. The worker's attitude toward the company is often determined by the treatment he receives from the camp clerk," Mr. Wilson said.

OLD COLONY'S SAFETY RECORD HONORED

In recognition of its 300 employes having worked 1,448,558 hours without a lost-time accident since November 1946, the Old Colony Envelope Co., Westfield, Mass., on March 15 was presented with a plaque by the Liberty Mutual Insurance Co., to commemorate its outstanding performance. . . . In the picture, from left to right are: Herbert T. Sweet of the insurance company; Albert Walton, Old Colony's safety engineer; George W. Waters of the insurance company; and President Joseph A. Chadbourne and Vice-President S. Guy Ashley of the Old Colony Envelope Co. . . . Twice in the past, the company's 300 employes have run up records of more than 1,000,000 man hours worked without a lost-time accident. Over the past 13 years, the company's injury frequency rate has been 1.79 as compared with an industry average, compiled by the National Safety Council, of 26.54.

Lake States TAPPI Meet

APPLETON, Wis. — The Lakes States Section of TAPPI will meet April 12, at the Legion Clubhouse. Following dinner at 6:30 p.m., Dr. Ferdinand Kraft, technical director of Marathon's Canadian sulfate mill, will speak on "Marathon in Canada," H. C. Crandall, section secretary, reports.

Dr. Kraft came to Marathon in Canada as technical director in 1945 and brought with him a wealth of experience in pulp and paper, as well as an outstanding background of academic achievement at the University of Frankfort am Main, University of Giessen and the Technical University at Darmstadt.

Subsequent to several years of research work for Canadian International Paper Company at Hawkesbury, Ontario, Dr. Kraft made a detailed study of the rayon industries in France, Italy, Austria, and other European countries. Returning to the United States in 1928, he carried on the research and development work for the Canadian International Paper Company plant at Temiskaming, Quebec, where he remained as assistant technical director until joining Marathon in 1945.

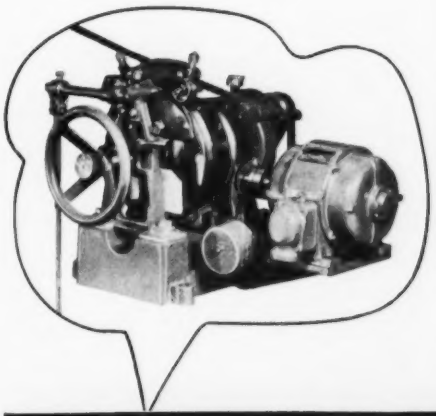
AICE Tulsa Meet May 8-11

TULSA — Twenty-seven papers are programmed for presentation at the regional meeting of the American Institute of Chemical Engineers at the Mayo Hotel, May 8-11. R. E. Pierson, 2325 South Delaware street, is in charge of pre-convention registration, and J. C. Weaver, Jr., 3319 South Trenton avenue, is in charge of hotel reservations.

"WHEN I LOOK BACK, I WONDER HOW WE EVER MADE ACCEPTABLE PAPER WITHOUT THE BIRD CONSISTENCY REGULATOR"

(SAYS THE OPERATOR)

The mill is making board specialties and the Bird Regulator is installed at the machine chest. They give it credit for a substantial production increase and they now feel they couldn't make satisfactory paper without it.



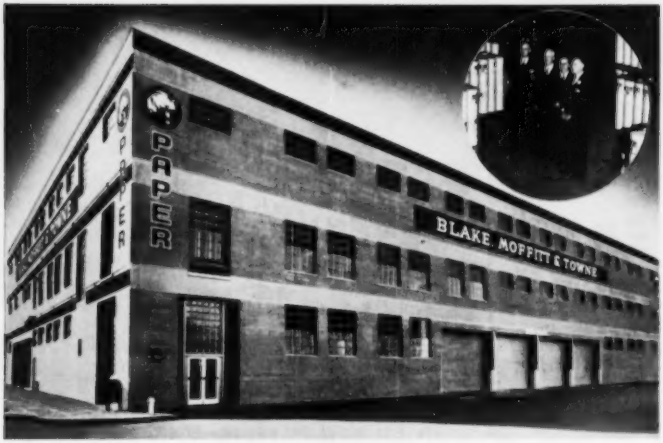
Bird Consistency Regulators are being put in all over the place — ahead of knotters and flat screens in pulp mills, at pulp thickeners before bleaching, at pulp drying machines and ahead of brown stock washers; in paper mills at the Jordans and at stuff chests and machine chests, after plunger pumps and centrifugal pumps.

The Bird Regulator holds consistency to not more than 0.1% heavier or lighter than desired. It works steadily and dependably, without attention.

May we submit layouts and estimates?

BIRD MACHINE COMPANY

SOUTH WALPOLE • MASSACHUSETTS



B, M & T IN NEW OAKLAND QUARTERS

Mill representatives, customers and friends visiting the newly opened Oakland, Calif., distributing plant of Blake, Moffitt & Towne ran the total of registrations in the visitors' book to more than 1,000. The building, with more than 100,000 square feet of warehouse space, is four times as large as its predecessor. It is equipped with every facility to assure efficient handling of large stocks of paper, paper products and twine. A two-way loud speaker provides contact with all floors, and rapid filling of small and medium-sized orders is made possible by a spiral chute which drops merchandise from the floors above to the packing and shipping departments. Pallets are readily transported by motorized fork lift equipment, making possible directional traffic flow of merchandise in and out of the building. Diagonal layout of palletized merchandise speeds storage of stocks and filling of orders. . . . Eight delivery trucks can be handled at the loading docks simultaneously. At the same time, three freight cars can be placed on the company's own siding while two van highway trucks may be loaded or unloaded within the building. . . . The offices on the second floor of the new building include those of J. Lloyd O'Connell, division manager; and J. Kronenberg, wrapping paper sales manager, and C. M. Christie, printing paper sales manager. Adjoining the general offices is the salesmen's room where each of the 30 outside salesmen has a desk. . . . Special facilities include a recreation room for the men and lunch room for the women. . . . Shown in the inset are, left to right: Arthur W. Towne, vice-president; James K. Moffitt, president; John F. Hassler, city manager (City of Oakland); and Mr. O'Connell.

Europe Recovering, ECA Reports

WASHINGTON—Europe's once flourishing pulp and paper industry, in a badly deteriorated condition during and since the war, is beginning a slow climb to recovery with the assistance of raw materials and machinery financed by U. S. dollars, the Economic Cooperation Administration said on April 4.

"Europe still is unable to supply its own needs from its pulp and paper industry, yet before the war it was not only self-sufficient, but exported large quantities of both pulp and finished paper to the rest of the world. With ECA-financed assistance, Europe has more mills operating and more paper available for consumers today than a year ago," an ECA spokesman stated.

"Production estimates for the current fiscal year, ending July 1, 1949, as compared with the previous year, indicate that total board and paper production will be up nine percent in England, 36 percent in France, 32 percent in Holland, and 40 percent in Belgium.

"A lack of pulpwood from Eastern Europe, an important source before the war, is one of the reasons why Europe, despite the recent increases, is still 20 percent below pre-war production. Other reasons are the restrictions placed on production and consumption by government legislation, and war damage, as yet unrepaired, to the paper mills of Europe, especially those of Germany.

"In its effort to revitalize the pulp and paper industry in the war-damaged countries, ECA has financed the purchase by European cocuntries of about $53,000,000 worth of pulpwood, pulp and paper and about $3,000,000 worth of production machinery during the first year of the European Recovery Program.

"About $31,000,000 worth of raw materials and Canadian newsprint covered on contract were authorized for procurement by the United Kingdom. About $10,000,000 worth of pulps were authorized for Bizone Germany, $3,000,000 for France, and something less than $2,000,000 each for Italy, The Netherlands, Belgium and Ireland.

"In all cases, ECA has avoided authorizations for purchase of finished paper products unless the needs of the country made it absolutely necessary. The policy has been to encourage the shipment of pulpwood to be processed into pulp or the shipment of pulp to be made into finished paper by European workers in their own mills.

"About 90 percent of the authorized purchases were for raw materials in the United States and Canada and the remainder in European countries.

"ECA plans to continue its financial assistance for the recovery of Europe's pulp and paper industry, authorizing procurement of raw materials in about the same volume and by the same countries. As the aid continues and the industry revives, ECA expects to authorize an increasing amount of dollars for capital expenditures in machinery and equipment and a decreasing amount for raw materials from North America."

Canadian Carloadings

OTTAWA—Carloadings on the Canadian railways of woodpulp and paper increased to 4,358 cars for the week ended March 19 compared with 4,314 cars in the preceding week, but 4,518 cars in the week ended March 20, the Canadian Government reports.

The Eastern Division accounted for 3,820 cars, 3,723 cars, and 3,944 cars for weeks ended March 19, March 12 and March 20 last year, respectively, with the Western Division showing 538 cars, 591 cars, and 574 cars respectively on these same dates.

The cumulative total of car loadings of woodpulp and paper on the Canadian railways from the first week of 1949 to week ending March 19 dropped to 48,804 cars, compared with 49,363 cars in the similar period a year ago, with the Eastern Division showing 42,530 cars against 42,937 cars a year ago and the Western Division 6,274 cars against 6,426 cars last year.

Win Honorable Mention

CHICAGO—In the 1949 box competition, held in connection with the annual meeting at the Drake Hotel of the Folding Paper Box Ass'n. of America, honorable mentions were presented to the Hardner-Richardson Co.; Fleishhacker Paper Box Co.; American Coating Mills; United Board & Carton Co.; F. N. Burt Co., Inc.; and Wilkata Folding Box Co..

N. Y. Golf Outings

NEW YORK—Coming golf outings are reported to be scheduled as follows: New York Paper Trade Ass'n., June 2; New York Paper Club, June 9; SAPI, July 20.

SOLAR BLUES BRIGHT FAST UNSURPASSED FOR TINTING WHITE PAPER

GENERAL DYESTUFF CORPORATION

NFCTA Convention, March 25

NEW YORK — Industrial executives were urged on March 24 to lower their break-even points as an anti-recession step, and reductions of as much as 30 per cent were envisaged. George T. Trundle, president of the Trundle Engineering Co., Cleveland, told more than 75 members of the National Fibre Can & Tube Ass'n., at the annual convention at the Astor Hotel, that by this step, plus lower prices and increased inducements "to get customers back," manufacturers could effectively fight recession trends.

Mr. Trundle emphasized that wages are not coming down, and said "industry does not want them to come down." He pointed out that in his own company he had brought down the break-even point from $120,000 per month, to a new level of $35,000 per month. He emphasized that industrialists must do likewise. Another place where action is required, he declared, is in disposing of high-priced inventories.

New officers elected included: President, J. W. Barbee of the Motor City Paper Can Co., Detroit; vice-president, R. A. Watters of the George W. Dinsmoor Co., Lawrence, Mass.; and treasurer, A. Niemand of Niemand Bros., Inc., Brooklyn.

Paul S. Hanway, managing director, in a review and forecast of the industry's business conditons, pointed out that record peacetime total sales last year, amounting to $65,000,000 from about 90 establishments, compared with $20,000,000 for 65 companies 15 years ago. He reported employment still normal and predicted "near-peak" volume for total industry sales of this group during 1949.

Thomas F. Brennan of the American Can Co. urged members to increase their total volume by creating new uses for fiber tubes. Indicating potential new markets he cited Christmas tree ornaments, tobacco containers, food products containers, golf balls and household textile containers.

Prof. B. Werne of New York University Graduate School of Business warned against risks involved in loosely accepted pension plan arrangements. Despite problems of legalisms in collective bargaining, managements can still "stay in business" and retain perogatives by improving techniques of handling bargaining procedures, he said.

Dow Plane Tragedy

LONDON, Ont.—Willard H. Dow, 52, president of the Dow Chemical Co., Midland, Mich., his wife and three other persons were killed here on March 31 when a company plane, carrying them to Boston for Winston Churchill's speech, crashed and burned.

Calvin Campbell, 46, Dow general counsel, was the only survvior.

The victims, in addition to Mr. and Mrs. Dow, were Mrs. Campbell, who was accompanying her husband on the trip, and company pilots Fred Clement and A. J. Bowie, all of Midland. Mr. Campbell was burned about the arms when he tried to pull his wife from the wreckage.

The plane left Midland Airport in the morning and encountered a drizzle. Mr. Campbell said the de-icing equipment failed and that the pilot, who kept in radio contact with the ground, was trying to make London Airport.

After circling the field, the two-motored plane crashed on a farm, plunging into a knoll at a speed of 100 miles per hour. Alerted by the control tower, emergency equipment reached the scene quickly, but only Mr. Campbell escaped.

The Dows and Campbells were en route to Boston for the mid-century convocation at Massachusetts Institute of Technology where the Dows' son, Herbert, is a student.

Mr. Dow took over as president and general manager of the chemical company upon the death of his father in October, 1930. He was a native of Midland and had attended its public schools and the University of Michigan. He married Martha Pratt, his high school tweetheart, in 1921. They left one other child, Mrs. McCauley Whiting.

Scrap Obsolete Restrictions

NEW YORK—Because of restrictions suffered by many industries from out-of-date and non-uniform local regulations, a committee of the American Standards Ass'n. is issuing in booklet form an analysis of the question, "How can nationally recognized standards legally be used in state laws and local ordinances?" The committee has come to no decision and is making no recommendations, but hopes that its analysis will bring comments and suggestions that may help to solve the problem. Industries and groups that have found their business hampered by varying local requirements and by regulations that make it necessary to supply out-of-date or nonstandard materials are invited to send their comments to the ASA.

Four principal papers are included in the booklet, which is titled "Nationally Recognized Standards in State Laws and Local Ordinances." They show how lack of uniformity in technical requirements increases costs to industry and to the public, and reduces public safety; analyze the need for legal methods that will permit widespread use of nationally recognized standards; summarize the present status of the "adoption by reference" method; and discuss the legality of several methods that have been followed in using national codes and standards as a basis for local regulations. Titles and authors of the papers are:

"Economic Effects of Lack of Uniformity of Acceptance of Nationally Recognized Codes and Standards (on Manufacturers of Building Materials and Equipment, on Distributors, and on Industrial and Commercial Users)," by F. Stuart Fitzpatrick, manager, construction and civic development department, Chamber of Commerce of the U. S.; "Effects on the General Public, on Public and Private Building Agencies, and on the Home Owner of Lack of Uniformity of Acceptance of Nationally Recognized Codes and Standards," by Leonard G. Haeger, director, technical staff, Housing & Home Finance Agency; "Municipal Adoption of Codes by Reference," by Roy H. Owsley, associate director, American Municipal Ass'n.; and "The Constitutional and Legal Problems Surrounding the Use of National Codes and Standards by States and Municipalities," by R. R. Irvine of Donovan, Leisure, Newton, Lumbard & Irvine, New York.

In addition to the four principal papers, excerpts are included from model statutes and ordinances proposed by organizations that have been working on the problem.

Worthington, Sales Mgr.

CAMDEN, N.J.—National Waterproof Papers Inc., and C.T.C. Industries, an affiliated company, has named Raymond N. Worthington sales manager. He will handle the sales policies for these companies, including their crepe-kraft division formerly at Newark. Mr. Worthington was formerly with the Scott Paper Co., in sales research and promotion.

POSNER'S NEW QUARTERS

S. Posner Sons Inc., packaging specialist and distributor of food protection and industrial papers, is now in larger modern quarters at 23-23 Borden Avenue, Long Island City 1, N. Y.

Methocel:

the Indispensable Film Former

Do you need a better film former? Try the *new* Methocel, *powdered*. Methocel is water soluble, inert and neutral and has wide application in the paper industry.

The exceptional film forming property of Methocel is shown by its high sizing power to oils, greases and waxes. The application of dilute solutions produces a marked resistance to the penetration of gloss inks, varnishes, solvents and waxes. Gloss ink paper board, special waxing stocks, carbonizing papers and lacquer base papers, are being treated with Methocel because of its high filming efficiency.

The broad range of viscosity types available provides easy control of size concentration at any desired viscosity level. This formulating flexibility provides the key to efficient specialty sizing.

Find out about the *new* Methocel, *powdered* now! Send the coupon for your free experimental sample of the new Methocel. Our technical staff is always available to assist you in adapting the unique properties of Methocel to your paper problems.

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CHEMICALS INDISPENSABLE
TO INDUSTRY AND AGRICULTURE

Development of Bark Products by Weyerhaeuser

WILLIAM G. VAN BECKUM
Weyerhaeuser Timber Co., Longview, Wash.

The forest products industries of the nation each year are becoming more and more conscious of better utilization of the forest crop. Long a leader in this trend from the standpoint of both plan and action, the Pacific Northwest is actively participating with other sections of the country in a program of more complete forest utilization. Joining in this effort are the Northwest's forest products industries, Federal and State agencies, schools and other organizations and individuals.

The Weyerhaeuser Timber Company, with its 2,170,000 acres of forest timberland—forty billion feet of standing timber—displays real interest in greater wood utilization. In 1941 it took a substantial stride in this direction when it established development as an activity to be separately managed and financed, setting down as the broad objective of development "to increase the realization from each acre of forest land harvested". This has nothing to do with harvesting more acres. The important thing in this objective is better utilization of the material on these acres already being harvested.

With the establishment of development plans in 1941 and the provision of development facilities in 1942, active work on by-product wood utilization began. Bark took its place along with several other types of by-product wood as raw material for various development projects.

It is only natural that bark should occupy an important place in this plan of increasing the realization from each acre of forest land harvested. Over a million board feet of logs, still wrapped and protected by the bark that gave protection from insects and injury in the forest, arrive each day at the Longview operations of the Weyerhaeuser Timber Company. Of this amount, some 800,000 board feet are Douglas fir. With bark accounting for approximately 12 percent of the weight of these logs, the daily tonnage of Douglas fir bark arriving at the Longview operations alone is in the neighborhood of 200 tons.

Product Development

With the decision to launch a bark utilization project in the Weyerhaeuser development program, a detailed pat-

WILLIAM G. VAN BECKUM

tern of attack was formulated. The pattern was so designed as to fit into the basic organization plan of the development department, and ran the whole gamut from idea conception through pilot and production plants into a new line of business for the company.

The first scale of operation was laboratory investigation of the raw material, carried on by the Science Sections of the Development Department, Physics and Chemistry. Even at this level the entire project had to be constantly borne in mind, for in examining the bark for composition, processing characteristics and possible product utilization had to be appraised at the same time. Laboratory processing had to be along lines that were within the scope of economic commercialization, with the added limitations of equipment availability imposed upon the project because of war. Laboratory evaluation of product utility had to directly correlate back to product properties and processing characteristics.

Encouragement from laboratory evaluation led to the second step in the development process, the semi-commercial or pilot plant stage. This introduced three Engineering Sections of the Development Department to the project. These were the Mechanical Engineers, to design, build and maintain the pilot plant, the Process Engineers, to assist in the design and to operate the plant and manufacture the products, and the Product Engineers, to find markets for the products and to handle initial merchandising.

All these activities were necessary to demonstrate the feasibility of producing this new line of products day in and lay out, constantly maintaining and improving product uniformity and quality, and, of course, producing the materials economically. These activities were further necessary to demonstrate customer interest in and regular customer acceptance of the products.

Pilot plant operations are not recognized as money-making ventures, and this one was no exception. The expenditures involved in pilot plant work are considerably greater than in laboratory work, because of the capital dollars in plant investment and the operating dollars necessary to run the plant. But profit was not the purpose of the pilot plant work. Rather it was a matter of acquiring sufficient knowledge and experience to afford a decision relative to the advisability of a production plant.

When dealing with a natural product such as a forest raw material, it is advisable to carry on a pilot operation at least throughout a calendar year. This gives a picture of the effect of seasonal variations on quality of the raw material and its response to processing, together with an evaluation of the effects these changes might have on consumer use of the resulting products. Fortunately, we learned as the result of two years of operation of our pilot plant and over a year's operation of our production plant that the manufacturing process readily adjusts itself to these changes which, fortunately again, turned out to be relatively minor.

Throughout the period of pilot plant operation, the Process and Mechanical Engineers constantly worked the experimental plant upwards in production rate, discovering and removing bottle necks, modifying process steps and equipment design and improving product quality and uniformity, all in preparation for the construction of production facilities. During this period also, customer acceptance of the products was actively followed. Problems arising here were, of course, equally as important as those arising

Paper presented to Northeastern Wood Utilization Council Bark Conference and published in Bulletin 25 "The Chemistry and Utilization of Bark".

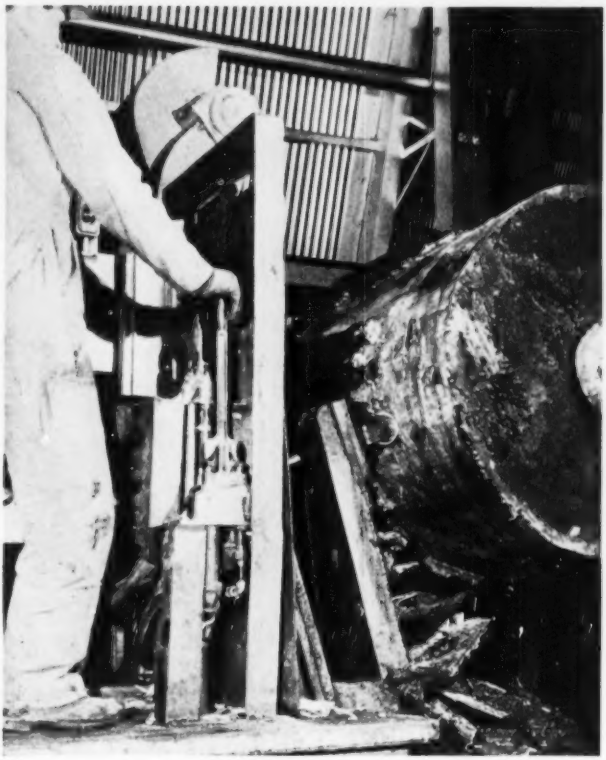


Figure 1. Compression Barker in Operation.

in manufacture, and in some instances they were of sufficient magnitude to warrant changes in the manufacturing process and specifications of the finished products.

When sufficient experience and knowledge had been acquired with respect to markets, uses, prices, commercial quality and means of control and manufacturing and capital costs, the production plant phase of the work was ready for consideration.

After reviewing the project carefully, Management gave its approval, and the Engineering Department of the Company, assisted by Development, then proceeded with design and construction of the production plant. On completion, Development assumed responsibility for the technical phases of initial operation and has continued to service the plant to reduce costs and improve product quality.

It is clear from the foregoing that, as the project progressed from conception to production, the financial expenditure and the Development staff time necessary to achieve this progress increased by leaps and bounds. Correspondingly, the problems to be solved increased rapidly in scope and complexity.

The plant manufacturing these bark products has been in operation since early 1947, performing remarkably well considering the fact that it is the first manufacturing unit of its kind, with nothing in the way of industry experience to guide its operation and performance. At the time comercial production was started, these bark products were given the trade name SILVACON.

Raw Material and Manufacturing

Bark, as a type of by-product wood requiring utilization, originates in the Weyerhaeuser Longview operations at several different locations. For example, the newest source is from the hydraulic barker of Sawmill No. 1 where, less than a month ago, the barking of sawlogs was introduced as a routine step in lumber manufacturing. This innovation is expected to effect substantial savings in lumber manufacturing costs.

Another source of bark, the actual source supplying the Silvacon manufacturing plant, is the plywood plant. Here is an example of what integration can achieve in the way of developing by-product wood utilization. The Silvacon plant was built adjacent to the plywood plant, through which 40,000 board feet of Douglas fir logs pass each day in the manufacture of plywood. Removal of the bark from these peeler logs, necessary prior to the peeling of veneer, each day provides 10 tons of Douglas fir bark, at present plywood production rate, as raw material for the adjoining Silvacon plant.

A further example of close integration is the movement of bark from the plywood plant to the Silvacon plant as raw material, and the return of one of the resulting bark products to the plywood plant as an ingredient to be used in the manufacture of plywood adhesive.

An interesting sidelight in this project was the development of a special barker to provide wood-free bark of the highest quality for the manufacture of Silvacon products. The wood-contaminated bark obtained through use of the conventional cutter-head barker would not permit manufacture of pure uniform bark products.

This new barker utilizes the principles of compression and shear to remove bark from the log. A rotating head mounted at the end of a piston is forced against the log, and as the latter rotates in a lathe the compression head travels the length of the log closely following its contours, compressing the bark and then shearing it from the wood at the cambium layer. In addition to providing wood-free bark, the barker effects a 5 percent saving of wood because of the absence of any cutting action.

Processing steps in the manufacture of the Silvacon products start with transport of wet bark to the processing plant, either directly from the plywood plant or from the bark storage area. Primary shredding is the first step following arrival of the bark in the processing plant. This breaks the bark slabs down to a size satisfactory for grinding. Following the grinding operation, ground bark is pneumatically conveyed through a cyclone collector to a storage bin.

Ready for further processing, the material passes through a hot air recirculating drying system, followed by separation into (1) material requiring ball milling to effect further purification and (2) Material not requiring further purification.

The next processing step, ball milling followed by secondary screening, effects purification of cork and purification of fiber. With cork and fiber now separated, collection of powder is the next step. This is accomplished by an air separation of powder from several combined intermediary products. By combining and blending screened fractions from the cork and fiber manufacturing steps, one mixture product

is obtained, and a second mixture product is produced after air separation of powder from other blended screening fractions.

As produced, the various Silvacon products are pneumatically conveyed to their individual storage bins and from there they are bagged and are ready for shipment.

Silvacon Products and Uses

The Silvacons discussed below constitute the five principal products now manufactured by Weyerhaeuser from Douglas fir bark. To utilize the unique properties of Douglas fir bark to the fullest extent, constant development effort is being directed toward the creation of additional products that will possess qualities, properties, and characteristics supplementary and complimentary to those of the Silvacons being manufactured today.

Silvacon 383

Silvacon 383 consists predominantly of flake-like, light brown particles of cork and is the most reactive major component of Douglas fir bark. It is thermoplastic and exhibits flow under heat and pressure.

Chemical analysis shows the presence of 60 percent lignin. Solubility varies, as in any natural product of this type, but falls in the approximate range of 22 percent ether soluble, 20 percent soluble in water and 65 percent soluble in 2 percent caustic solution. pH of an aqueous suspension is 3.6.

Since it exhibits definite phenolic characteristics, Silvacon 383 is being followed closely as a possible alternate for phenol in phenolic resin manufacture. Its high extractive content suggests utility as a source of wax and tannin.

Silvacon 383 is finding wide use as a soil conditioner, for in this role it remains loose and keeps the soil moist for exceptionally long periods, and it is always clean and easy to handle.

Experimentally, Silvacon 383 is being used in flooring materials, cork products, adhesive formulations, rubber products, as a burnout filler and in numerous other industrial applications.

Silvacon 508

Silvacon 508 is composed largely of the spindle-shaped, stiff bast fibers of Douglas fir bark. Chemically and to some extent physically these fibers bear a closer resemblance to wood than they do to the other constituents of bark with which they are associated.

Lignin in Silvacon 508 amounts to 34 percent, and solubility in ether, water and 2 percent caustic solution is 2, 4 and 28 percent respectively. pH of an aqueous suspension is 4.0.

Its fibrous character adapts Silvacon 508 for use as a reinforcing filler in the manufacture of hard, high density products, where it improves strength and minimizes shrinkage. One of its proved uses is as an ingredient of impact grades of thermosetting molding compounds, and it finds utility also in rubber as a reinforcing filler.

Outside the plastics field, Silvacon 508 has proved valuable as an ingredient of magnesite flooring, where it imparts added wet strength, greater water resistance and other useful properties.

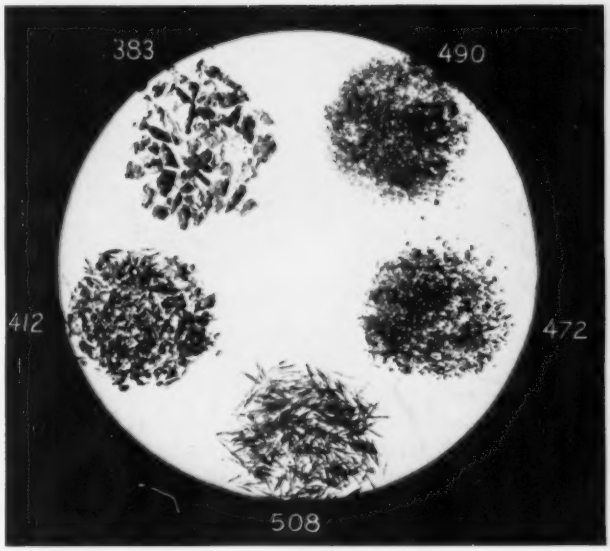


Figure 2. Silvacon Products.

Silvacon 490

The finely powdered amorphous material obtained primarily from the highly friable parenchymous tissue of bark is identified as Silvacon 490. It contains 65 percent lignin, shows 13 percent water solubility, 10 percent ether solubility and is soluble to the extent of 78 percent in 2 percent caustic solution. pH of an aqueous suspension is 3.8. Particle size analysis shows 9 percent through 200 and on 325 mesh, and 90 percent through 325 mesh.

Silvacon 490 is a free-flowing, nonbridging material that finds large volume utility as a conditioner for insecticide dusts. In this use it lightly coats the insecticide particles and thus prevents caking during manufacture and storage. There are indications that Silvacon 490 will be useful for developing finish in thermosetting molding compounds. Other promising uses for this product are being developed.

Silvacon 412

Silvacon 412 is a mixture product consisting of cork particles, similar to 383 but smaller, uniformly blended with fiber. Properties of these individual bark constituents are combined to give Silvacon 412 unique utility as a reactive filler in thermosetting molding compounds and cold molded plastics. In addition to these uses, it responds much in the same manner as Silvacon 508 in magnesite flooring.

As an ingredient of vinyl flooring Silvacon 412 is attracting interest because of the buoyancy and resiliency is imparts.

Silvacon 412 is finding use in rubber outersoles, sponge rubber and a variety of other rubber products.

Silvacon 472

The individual components of Douglas fir bark—cork, fiber and powder—are uniformly blended to give Silvacon 472. Because of its uniformity and chemical components, Silvacon 472 combines with phenolic resins to give high quality exterior grade plywood adhesive at an appreciable saving in glue line costs. It is finding application or being established as an extender for other types of adhesives.

In addition to its success in adhesives, Silvacon 472 finds application as a reactive filler in thermosetting molding compounds, conditioner for fertilizers, ingredient of cold molded plastics and as an agent for emulsion compounds.

Silvacon 472 is undergoing industrial evaluation in many other diversified fields.*

Conclusion

The foregoing analysis of the problems encountered in the development of bark products by Weyerhaeuser is an illustration of the time, the effort and the expense that are often involved in the development of new consumer products from by-product wood.

For example, raw materials have to be available in uniform quality and adequate suply. They must be accessible and available to the wood processing plant with a minimum of collection and classification effort. Requirements of raw material, of course, go far beyond these.

Bark, particularly Douglas fir bark, with its cork, fiber and powder constituents, has the all important quality of versatility. There are types of by-product wood and related materials that meet many requirements of an ideal raw material, but they lack versatility with respect to physical properties, chemical reactivity and all-around usefulness.

With respect to processing characteristics, the raw material must lend itself to economical separation of its component parts, giving products of suitable and frequently high standards of purity. When these, the requirements of raw material, have been met, the problems of development time and cost, manufacturing cost, capital investment, markets and selling price must be met and solved.

The latter problems, of course, are not singularly those of the wood industry. They are development problems common to all industries. But when we of the wood industries solve them, then we have achieved the ambition not only of Weyerhaeuser but of all who have the interest of our forests at heart, "an increased realization from each acre of forest land harvested."

Better Drying, at Low Cost

G. R. VAN KAMPEN

Sales Manager—Red-Ray Mfg. Co., Inc., New York City

There are many indications that the return of competitive conditions will require that most mills keep a closer check on all costs in order to maintain profitable operation. This trend makes it particularly important to effect economies in production whenever possible.

Unfortunately, to improve methods of production, it is usually necessary to make substantial investments in equipment. This is especially true in regard to the usual equipment required for paper drying, which normally requires the addition of new drier rolls and frames or hot air chambers as well as boilers to furnish steam. Such installations are costly and require additional space. Where more steam generating equipment is needed the cost and space requirements may be prohibitive.

Because of the high cost, considerable time is required for these improvements to pay for themselves and there is an increasing hesitancy toward long term amortization programs, even though they appear to be definitely profitable.

Modern radiant gas burners offer a solution to this problem by providing high drying capacity in compact form. The cost is relatively low and the installation can usually be made in such a manner as to require no additional space. Equipment now in operation shows that adding one radiant gas burner increases drying capacity by more than the equivalent of one additional dryer. Many paper mills have increased their drying capacity by 10 percent to 15 percent or more by adding radiant gas burners.

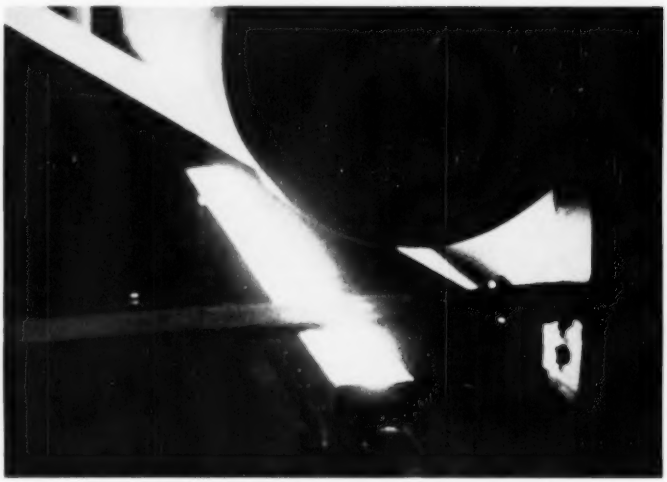


Figure 1. Red-Ray radiant gas burner in operation under a steam dryer.

Studies of costs show that the burners frequently pay for themselves in months rather than years, as is usually true with other types of equipment. A further advantage is that additional burners may be added from time to time, making it practical to carry out a project in steps rather than all at one time.

Radiant burners are used successfully on a wide variety of papers ranging from fine bond papers to roofing felt and board.

Coating operations offer a particularly profitable use for radiant burners. Drying speeds are frequently doubled and tripled—in addition, the problem of coatings adhering to dryers is often solved. These burners, being flameless, may be operated in inverted as well as upright position. This makes it possible to locate them under, at sides of, or above dryers — or they may be mounted ahead of dryers on either or both sides of the paper.

Automatic controls protect the paper

from possible damage in case of paper breaks or shutdowns. When burners are turned off, air continues to flow through the burners causing a rapid cooling, to avoid burning or scorching of the paper. Experience shows that the residual heat reaching the paper is insufficient to harm it.

The growing use of gas burners on paper drying jobs follows the general trend toward the use of gas as a source of heat in industry — really a swing toward generation of heat at point of use by means of individual heat generating units. This principle has been widely adopted in the case of power. Rarely do you now see one large power unit in a mill, with all the belts, pulleys and shafting which were evident a generation or two ago. Now each machine is provided with its own motor.

Gas can be piped to the various locations more efficiently than steam and when not used there is no cost. Wide ranges of temperature and heat capacity as well as high flexibility of operation and low maintenance costs give these unit heaters a big advantage over steam.

A careful study of processes in the average mill will reveal many opportunities for improvement with a small investment. Gas equipment can be added step by step as advantages and economies are proven and as the equipment pays for itself.

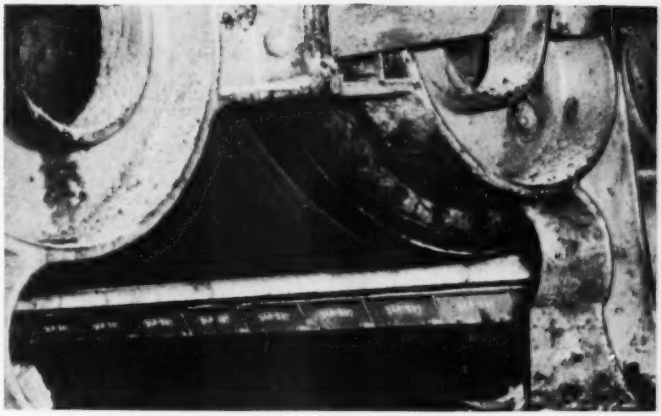


Figure 2. A close-up of Red-Ray radiant burner installation under dryer.

Proper application and control of gas burning equipment has a vital bearing on the results. Properly installed and used it will solve many production problems and show increased efficiency and economy.

Development of Latex as a Paper Coating Adhesive

E. K. STILBERT

Coatings Technical Service, Dow Chemical Co., Midland, Mich.

Natural Latex

The word "Latex" botanically refers to the milky sap of many plant families. Historically, however, most of us relate the term to the milky fluid from the rubber tree, hevea Brasiliensis. Due to the physical resemblance of synthetic polymer dispersions produced by the emulsion polymerization process to natural latex, they became known even in the very early days as "Synthetic Latices." Today many such products are being produced in volume by American industry and are commonly differentiated from natural latex only by the name or number.

Early work on the use of a latex as a paper coating adhesive was done with natural rubber latex since it was the only product available in quantity at the time. This was in the late 1920's. As a result of the work, two patents were issued, claiming rubber latex as a modifier for the casein, glue, and shellac regularly being used as adhesives. The initial properties of the coated papers were very interesting and desirable. Unfortunately, only a few months of natural aging showed failure of the coating due to oxidation of the rubber and loss of its adhesive power.

Synthetic Latices

About the same time, work on the development of synthetic latices was being carried forward by several companies in the United States. This resulted in commercial production of the Neoprene and Acryloid latices in the early 1930's. Although these latices possessed interesting adhesive properties, they were of little interest to the paper coating industry at the time, probably because of cost.

Synthetic latices developed slowly and primarily for special uses until the early days of World War II. The threat of losing natural rubber spurred government and industry to the development of a synthetic rubber that could be manufactured in large quantities as soon as possible. Fortunately, the rubber and chemical industries were well along with research and pilot plant studies. Very little time was lost in building plants and manufacturing the thousands of tons of synthetic rubber needed by the military.

The process for manufacturing synthetic rubber involved the manufacture of the latex form. In tire manufacture the bonding of rubber to the fabric utilized special rubber formulas. Since these were made to be used as latices, it was only natural that work on other uses for them was begun as soon as pressure for manufacture of solid rubber eased. And by this time the picture had greatly changed. Synthetic rubber was actually cheaper than natural rubber at the end of the war. The availability of low cost synthetic latices opened up markets that had never been considered previously.

One of the valuable tools available to the chemist in the manufacture of synthetic latices is the ability to vary the chemical components to obtain different properties in the polymer. Such variations from the original synthetic rubber composition have become of considerable commercial importance

Presented at a recent meeting of the Delaware Valley Section of TAPPI.

since the war. In some instances, such products are of general interest; others may be manufactured for a specific application and have properties suited primarily for that application.

Paper Coating Latices

Many latices have been investigated for use as paper coating adhesives, not only by latex manufacturers but by the research and development staffs of many paper companies. To date, only Dow Latex 512K has been found to have all of the properties required to make a latex suitable for paper coating. Some of the more important of these are: mechanical stability, compatibility with other coating ingredients, uniformity, low odor, satisfactory binding properties, stability of the polymer to aging, color stability and reasonable cost.

When they were first evaluated at Dow back in 1944, it was felt that a series of synthetic latices based on styrene and butadiene might be useful for various adhesive and coating uses where water solutions or emulsions were commonly being used at the time. Styrene and butadiene were chosen as the latex raw materials because of their low cost and availability as a result of the government synthetic rubber program. Initial screening work revealed that the properties of one member of the series, 512, were more generally useful than the others so work was concentrated on it.

Dow Latex 512K is 45 percent solids —water thin. When the latex is dried, it deposits a soft, flexible, elastic film. Initial evaluation work revealed that it was compatible with drying oils, varnishes, resins, and water soluble binders such as starch, casein, glue, etc. It exhibited excellent pigment binding properties both alone and in combination with the other materials. It was only natural to consider it as a potential binder for pigments in coated paper and paperboard.

That was in the fall of 1945. At that time casein was about 50 cents per pound! Glue was on allocation when it was available at all. As an extender for casein, Dow Latex 512 was a natural (incidentally, there was no "K" in those days) because of its compatibility and adhesive power. This film—a 50/50 blend of casein and Dow Latex 512 — illustrates the excellent compatibility of these two very unlike materials. Our initial laboratory work showed that Dow Latex 512K could readily be used with the other ingredients of paper coating colors and that the coatings were actually superior in many ways to regular casein-clay coated papers.

A few cooperative companies in the Kalamazoo area were approached with the preliminary data that were obtained in the laboratory. Their initial work proved that the latex was a very desirable modifier in a coated paper. Unfortunately, Dow Latex 512 was not mechanically stable enough to withstand plant processing. Encouraged by the reaction of the mill management to the properties of the coated papers, we returned to Midland and immediately put the problem to the research laboratory. The result was Dow Latex 512K, the adhesive that is being sold today. Fairly complete data on the properties of 512K were obtained and put in a bulletin on the use of "Dow Latex 512K for Clay Coated Papers." A copy of this bulletin is available from any Dow office on request.

The interest in Dow Latex 512K spread quickly through the off-machine coated paper industry. Since the same raw materials are also used in the wallpaper, decorative wallboard, and clay-coated boxboard industries, interest was quickly aroused in these industries also. Clay coated boxboard is similar to coated paper in that the coating is applied principally to serve as a base for printing. The same materials are used and, in general, the same types of machinery are involved. In the other fields, however, differences may exist. A large number of colored pigment pulps are used in the manufacture of wallpaper; an entirely different type of manufacturing equipment is generally used in making decorative wallboard.

Although a lot of development and service work has been related to the wallpaper and wallboard industries, the major emphasis has been on the manufacture of pigment coated printing papers. At first this work was naturally concentrated on methods of using Dow Latex 512K in various coating processes with the wide range of coating materials commonly used in the industry. As more and more information was accumulated, the emphasis shifted to the improved properties that could be obtained in the many grades of coated paper supplied to the printing industry. Such papers developed rapidly in all fields except machine coated papers. The development of machine coated papers containing Dow Latex 512K has been slower because the process is more complicated and the evaluation of the coated paper is more difficult.

Now that this phase of the development is about completed, we are naturally turning our attention to the printer and ink maker. Already two bulletins have been sent to printers as part of the program to attract the attention of those outside the paper trade to coated papers containing Dow Latex 512K. These are only the beginning! As the program develops, still finer papers and more outstanding examples of the printing art will be worked into it.

This is a very necessary step! We are naturally very pleased that 512K latex has been used with so little difficulty; that coated papers containing it have been printed by all printing processes and with standard inks. In fact, some companies have not been informed any of their customers that the adhesive is different. They are content to manufacture improved papers that are compared only to their previous papers.

We sincerely believe there is far more to be learned than has been learned by this procedure. Finer printing involves not only the paper manufacturer; it involves the ink maker and the printer—especially the printer. We intend to discuss Dow Latex 512K and its effect on the properties of printing papers with printers and technologists associated with the printing industry at every opportunity.

Literally thousands of tons of paper containing Dow Latex 512K have been printed in the last two years. The tonnage of paper containing the adhesive is growing and could continue to grow without the consumer ever realizing its presence. Frankly, the success of Dow Latex 512K has been due *thus far* to the fact that both the papermaker and the printer have been able to *consistently* obtain uniformly improved results in *regular* production. Fewer headaches and better customer satisfaction—two of the better reasons for using any product.

Underlying the difficulty in advancing the technology of coated papers has been the relative similarity in properties of paper coating adhesives. Starch, casein, soya protein and glue all deposit brittle, water sensitive films. Their solutions are relatively viscous at low solids. True, the development of equipment for coating has taken advantage of many of these properties. But that has been a necessity, since no materials of truly different properties were ever available until 512K latex was developed.

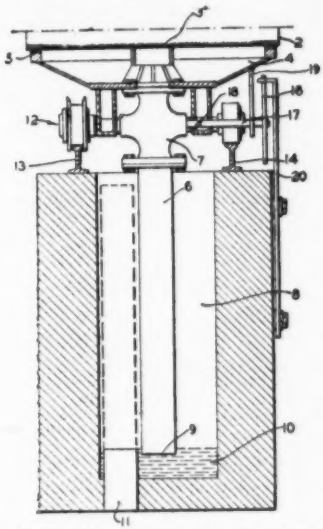
Use in Machine Coating

One of the major developments in the coated paper industry has been machine coating. Although the process has made coated paper available at a lower price, to date there has been very little evidence that the process has improved the quality of the paper. Yet improved printing quality is needed just as much as lower cost. Since improved printing quality means better smoothness, greater dimensional stability, and more flexible coatings, an adhesive that contributes these properties is really needed. It can do for the quality of printing what new coating methods, new printing equipment and new inks have recently done for the quantity of printing that we have seen in this country. Present results indicate that Dow Latex 512K may be the answer.

Patent Abstracts

● ***In addition to abstracts on the technology of pulp, paper and related industries, miscellaneous abstracts which may provide useful information to our readers are included herein.***

2,450,900—Machine for forming articles from a liquid slurry. John D. Lyall, Lancaster Township, Lancaster County, Pa., assignor to Armstrong Cork Co., Lancaster, Pa.

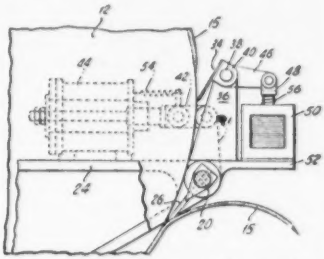


In a machine for the manufacture of mineral wool board and the like in which molds are moved along a path of travel into various operating stations, a closed tube extending below the mold and movable therewith, said tube having its outlet sealed in a water bath, and means for maintaining a predetermined level of water in said bath.

2,450,901—Method of treating liquid slurries to separate fibers from heavier particles. John D. Lyall, Lancaster Township, Lancaster County, Pa., assignor to Armstrong Cork Co., Lancaster, Pa.

In a method of treating a liquid slurry containing fibers and undesirable heavier particles, a substantial portion of the solids of the slurry having a tendency to settle out, the steps of establishing a circulatory movement within the body of slurry in a generally upwardly and downwardly direction by injecting a stream of air downwardly into the slurry, confining the upwardly moving portion of the slurry separate from the downwardly moving portion in a zone spaced from and above the point of air injection and accelerating the upwardly moving portion of the slurry with respect to the downwardly moving portion in said zone, adjusting the differential in rate between the upwardly and downwardly moving portions to draw the fibers out of their downward travel and into the upwardly moving portion but insufficient to draw the undesirable heavy particles out of the downwardly moving portion, permitting said heavier particles to settle out, and withdrawing the slurry of suspended fibers from a point above the level of the settled heavier particles.

2,450,957—Roll stripping mechanism. Louis A. Hawthorne, Hillside, N.J., assignor to Johns-Manville Corp., New York, N. Y.



In combination with a rotatable accumulator roll, a stripper bar extending lengthwise of the roll, a plurality of closely spaced fingers carried by said bar, means for mounting said bar for rotation to swing said fingers toward said roll into stripping position with the fingers pointing substantially opposite to said direction of rotation of the roll, a scraper supported above said stripper for movement toward and away from said roll, means controlled by the thickness of the sheet built up on the roll to rotate said stripper bar and move said fingers into stripping position, and means to cause said scraper to move against the roll in timed relationship to the movement of said fingers.

2,451,165—Sealing of closures for gusseted paper bags. Carl Henry Hartman, New Rochelle, N. Y., assignor to St. Regis Paper Co., New York, N. Y.

In a paper bag formed with a flattened multiwall gusseted tubular body portion, end closure means comprising a longitudinally folded paper strip of generally U-shaped cross section extending from side-to-side of the bag and positioned astride the end edges thereof, a line of stitches passing through said strip and said end edges as embraced thereby, and extending the length of said strip and securing same in place, and a coating of waxy material covering said strip and stitching, the fold line of said strip at points adjacent the gusset areas being perforated at spaced points, some of said waxy material extending through said perforations into contact with and substantially completely covering said end edge portions of the gusset areas and tightly sealing same with respect to each other and said closure means, the perforated strip protecting said edge portions and the waxy material thereon against disruption of the seal.

2,451,173—Rubberoid tall oil polymers and process for making the same. Richard Richter, Irvington, N. J., and John J. Miskel, Brooklyn, N. Y., assignors to Nopco Chemical Co.

A rubber-like polymer produced by polymerizing a hydroxy-acetylated tall oil by condensation by means of heat in the presence of an esterification catalyst serving as a catalyst for the condensation polymerization reaction.

2,451,355—Method of making identification tags. Joseph S. Pecker, Upper Darby, Pa., assignor to Dennison Manufacturing Co., Framingham, Mass.

In making tags of the type having an aperture and strand attaching means extending through the aperture with portions of strand extending along opposite sides of the tag from the location of the aperture to a location at the edge of the tag, the method which comprises holding said strand portions along opposite sides of the tag and fusing the two portions together at both of said locations.

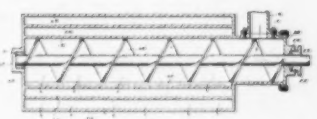
2,451,362—Lining composition and container wall lined therewith. Rudolph M. Snyder, Kansas City, Mo., assignor to Henry A. Johnson, Kansas City, Mo.

A coating composition adapted particularly for lining fiber containers to prevent the sticking thereto of asphalt and the like when the same is poured hot into the container and permitted to cool, said composition consisting essentially of water, dispersed particles of wax, bentonite and graphite, and a plasticizer of the hygroscopic type, said constituents being in homogenous admixture and being present in proportions to provide a pasty, spreadable mass, with the bentonite present therein in substantially greater proportions than the graphite and the wax in substantially the same proportions as the bentonite, the said bentonite and graphite serving as the barrier constituents.

2,451,377—Hydrogenation of tall oil. Harding Bliss, Hamden, Conn., and William C. Sussky, Little Rock, Ark., assignors to Dictaphone Corp., New York, N.Y.

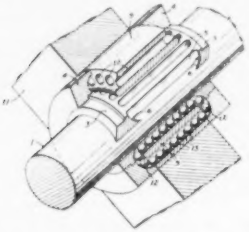
A method of producing a hard, fatty product from tall oil which comprises forming a mixture of tall oil and 1,4-dioxane containing from 0.3 to 2.0 parts of dioxane by weight per part of tall oil, hydrogenating the mixture in the presence of a finely divided metal catalyst at an elevated temperature and pressure, cooling the resulting product to cause said product to separate into a resin-containing liquid phase and a fatty, solid phase and separating said fatty solid from said resin-containing liquid.

2,451,305—Pressure head box for paper machines. William P. Shannon, Port St. Joe, Fla.



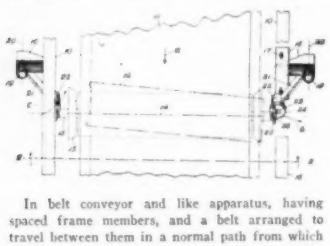
A pressure head device for a paper machine including a casing, a central chamber transverse said casing, means for feeding paper pulp axially into said chamber, power operated pressure means for delivering paper pulp from said chamber through said discharge slot, a spiral fin surrounding and forming a spiral delivery conduit communicating with said discharge slot, a longitudinal slot forming a discharge orifice from said conduit and an adjustable slice controlling the delivery from said orifice.

2,451,359—Rotary and sliding ball bearing. Theodore F. Schlicksupp, Long Island City, N. Y.



A rotary and sliding ball bearing comprising a race member having a race sleeve adopted to surround a shaft, an outer sleeve surrounding the race sleeve, said race member and outer sleeve being relatively rotatable, the race sleeve having a number of longitudinally extending slots and said outer sleeve having a number of longitudinal ball-return passages, means at opposite ends of the race member for establishing a ball-guiding path from opposite ends of each longitudinal slot in the race sleeve to opposite ends of a ball-return passage in said outer sleeve to thereby provide an endless ball circuit, and antifriction balls completely filling each of such endless ball circuits, at least some of the balls in the longitudinal slots in the race sleeve constituting load-carrying balls adapted when the bearing is assembled on a shaft to make rolling contact with the surface of the shaft and the inner surface of the outer sleeve.

2,451,394—Self-Aligning Conveyor roll mounting. Robert E. Klein, West Allis, Wis., assignor to Chain Belt Co., Milwaukee, Wis.



In belt conveyor and like apparatus, having spaced frame members, and a belt arranged to travel between them in a normal path from which it may deviate laterally at times; an arm pivotally mounted on each frame member for swinging movements transversely of the direction of belt travel, the pivotal axes of the arms being inclined in a direction longitudinal of the belt; a shaft engaging and supported by the free ends of said arms, the length of said shaft being less than the distance between the pivotal axes of the arms, whereby to dispose the latter in converging relation; and a belt engaging roll carried by the shaft.

2,451,410—Thermosetting laminating syrups. Edgar M. Queeny, Kirkwood, Mo., assignor to Monsanto Chemical Co., St. Louis, Mo.

A laminating syrup comprising from 1 to 15 parts of silica areogel and 100 parts of a thermosetting resin taken from the group consisting of phenol-aldehyde, melamine-aldehyde, urea-aldehyde, dicyandiamide-aldehyde resins, melamine-urea-aldehyde and melamine-dicyandiamide-aldehyde resins.

2,451,446—Light-weight fiber containing product. Joseph R. Parsons, Chicago, Ill., assignor to United States Gypsum Co., Chicago, Ill.

Process of producing semi-rigid insulating bats which comprises preparing a solution of a farinaceous material and a surface-tension reducing agent in water, incorporating a large number of small discrete air bubbles with said solution to form an emulsion of gas and water, incorporating dry water-insoluble fibers with the emulsion thus produced, thereupon blending the resulting mixture with an asphalt emulsion and with dry calcined gypsum, forming the final mixture thus produced into the desired shape without the application of substantial pressure thereto, and drying the thus shaped product.

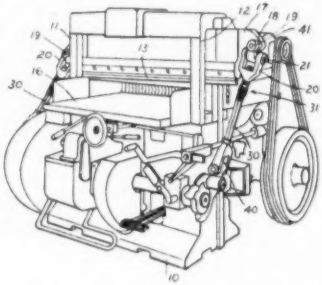
2,451,558—Chemically treated wood pulp and a method of producing a cellulosic product. Paul Henry Schlosser and Kenneth Russell Gray, Shelton, Wash., assignors to Rayonier Inc., Shelton, Wash.

As a new article of manufacture, a chemically prepared wood pulp product having incorporated therein from 0.01 to 0.2 per cent by weight based on the bone dry weight of the pulp of a mixed ether having the following formula:

$$R{-}O\left(\begin{array}{c}CHCH_2O\\ |\\ R_1\end{array}\right)_x H$$

where R is an aryl radical substituted by at least one radical selected from the class consisting of an alkyl radical with more than two carbon atoms, an acyl radical with more than two carbon atoms and a cycloalkyl radical; where R_1 is selected from the group consisting of hydrogen and methyl and where x is a whole number greater than 1.

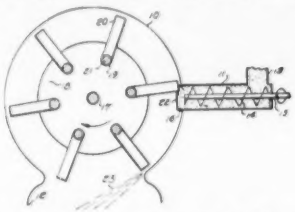
2,451,636—Cutting machine. William R. Spiller, Dayton, Ohio, assignor to Harris-Seybold Co., Cleveland, Ohio.



In a machine for cutting paper and the like having a work table for receiving the material to be cut, a cutting knife, a reciprocatory knife bar for supporting said knife and a drive, the combination of a crank operated from said drive, a non-circular pull bar connected to said crank, a coupling member connecting said pull bar to said knife bar for reciprocation of the latter through a cutting stroke, threaded means for adjusting the connection between said pull bar and said knife bar to provide for determining the position of said knife relative to said table at the bottom of its stroke, and releasable locking means effective between said coupling member and said pull bar including disengageable members on said coupling member and on said non-circular pull bar respectively adapted to cooperate to prevent relative rotational movement between said coupling member and said pull bar when engaged.

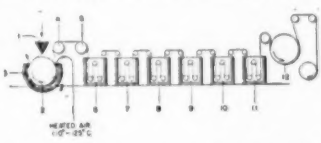
2,451,448—Treatment of Pigment comprising calcium carbonate. Harold R. Rafton, Andover, Mass., assignor to Raffold Process Corp., a corporation of Massachusetts.

In the treatment of a pigment comprising calcium carbonate, the method of modifying said pigment to effect an improvement in at least one of the properties of adhesive requirement, oil absorption and gloss-imparting quality of said pigment, which comprises directing paste comprising said pigment into the path of travel of teeth of a circular saw rotating at a peripheral velocity of not less than 100 feet per second, said paste being directed from beyond the periphery of said saw toward the center of rotation thereof, said paste being in coherent condition when at atmospheric pressure and capable of being conveyed by a screw conveyor, subjecting said paste to percussions from said teeth, said circular saw at the time of subjecting said paste to the action of said teeth being free from contact with said paste except in respect to said teeth, said paste being free from movement upon, and at the points of, said percussions, said paste being propelled by said teeth away from and out of the path of travel of said teeth.

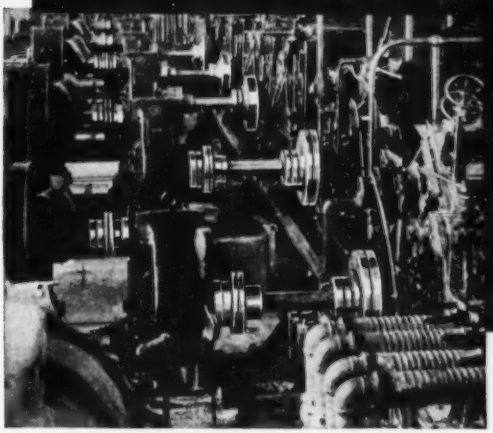


2,451,768—Regenerated cellulose film manufacture. James Burton Nichols, Wilmington, Del., assignor to E. I. du Pont de Nemours & Co., Wilmington, Del.

A process for preparing regenerated cellulose film from viscose which comprises extruding viscose on a support to form a viscose film, drying the viscose film in a stream of inert gas heated to a temperature of from 75° to 150° C., and circulating at a speed of at least 400 feet per minute with respect to the film until the water content of the film is reduced to less than 45% by weight before irreversible gelation takes place, and thereafter subjecting said film to the action of a non-swelling liquid regenerating medium until regeneration of the cellulose is substantially complete.



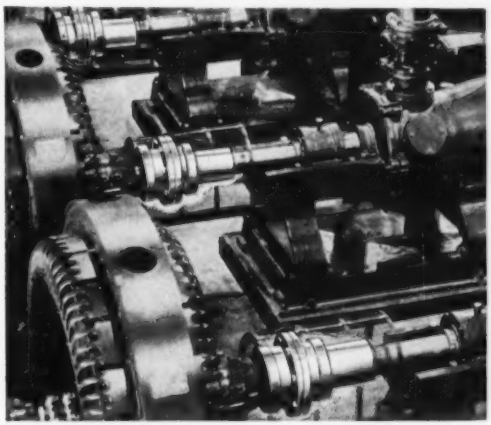
HOW YOU can STOP PAPER MILL SHUTDOWNS and get Peak Production from All your machines



FOR REMOTE DRIVES: Fast's Floating Shaft Couplings enable drives to be *set back* from paper machines without the use of supporting bearings. This eliminates one piece of equipment, does away with impossible task of keeping three or more bearings in line—saves installation cost, stops upkeep, attention, and bearing replacement. These Couplings have been in service since 1926!

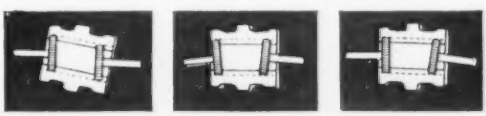
YES, needless coupling shutdowns are a thing of the past with Fast's Couplings on the job. Fast's are the *original* gear-type coupling... the coupling that really guards the load-carrying oil from moisture, dirt and grit, with this positive metal-to-metal seal formed by *exclusive* "rocking bearing," which virtually eliminates wear.

Fast's are the only gear-type couplings backed with many years of top engineering experience, Koppers' high standard of workmanship and unexcelled coupling service. You save money when you install Fast's because they *prolong* machine and motor life, *preserve* bearings by limiting wear, lower your upkeep costs and reduce shutdown losses! Get the facts about the complete line of Fast's Couplings! Write today or use the handy coupon. Address: Koppers Co., Inc., Fast's Coupling Dept., 234 Scott Street, Baltimore 3, Maryland.



FOR JORDAN ADJUSTMENTS: Fast's Jordan-Type Couplings reduce wear on bearings, prolong life of motor and Jordan. Because Fast's splines are *always* meshed in oil, plug adjustment is smooth and certain. No worn spots can develop—customary "hard spot" is eliminated. Due to smooth torque and absence of vibration, Jordan life is increased and product discharged from Jordan is uniform.

COMPENSATE FOR ALL MISALIGNMENT: The floating sleeve takes a neutral position. All forms of misalignment are compensated for between the lubricated faces of the splines, equally divided between driving and driven members. The entire assembly revolves as one unit.
The exaggerated diagrams below demonstrate the Fast's principle.



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Trends

Office of the PAPER TRADE JOURNAL,
Wednesday, April 6, 1949.

Wood Pulp

Further softening of wood pulp prices made headline news in the first days of the 2nd quarter when Puget Sound's unbleached sulphite eased below the new Canadian level of $118 to $115, full freight allowed; and other U. S. mills followed suit.

A firm Swedish decision to stay in their markets at competitive levels brought announcements from some Swedish importers that price of unbleached sulphite was now $118, bleached sulphite $130, unbleached kraft $105, bleached kraft $136, on dock Atlantic ports, full freight allowed to destination. The Swedish surprise move was construed by Karl Clauson, secretary of the Association of Pulp Consumers, as a constructive step which places Swedish pulp on competitive level with U. S. and Canadian product, "a very healthy condition for the market," Mr. Clauson said.

While high labor rates continue to represent 70% of production costs, and non-integrated paper mills average so low a net return on their sales and investments, it is not reasonable to expect the slight easing in pulp prices can be passed along in lowered paper and paperboard prices, in the opinion of leading speakers at the NPTA Convention today.

Waste Paper

A strong and steady paper mill demand for envelope cuttings, shavings, ledgers and other pulp substitute grades is said to be keeping life in an otherwise dull market. Should converting mills continue on a reduced production schedule, there is some likelihood that supply might be inadequate to demand. Undertone to this segment of the market is expected to maintain strength as paper mills look with favor on dollar savings between pulp substitutes and virgin pulp.

Mills are reported to be holding dealers to specifications of quantity and grade quality, with the number of rejects in keeping with good trade practice.

Adoption by the National Association of Waste Material Dealers of the simplified Waste Paper Standards and Practices — prepared by the joint dealer - mill committee — is a notable step in stabilization of the industry and in building good faith between buyers and sellers. In addition to the 42 grade definitions (published in the *Journal*, March 31 issue), Purchase Agreement, Fulfillment by the Seller, Fulfillment by the Buyer, Miscellaneous Practices, and Arbitration were standardized. Copies of the standards in booklet form may be obtained from the National Association of Waste Material Dealers, Inc., 1109 Times Bldg., New York 18, N. Y.

Also approved at the Chicago convention as a general practice is a charge to factory owners, office and apartment buildings and householders for the removal of low grades of waste paper. Because of the tremendous surpluses now existing, similar local action had been taken weeks ago to check rising losses of packers. Collective action was felt to be imperative.

Cottons

Diminished mill buying has made trading in new cuttings, rags and bagging a dull affair. Of the new cottons, only white cuttings are said to be wanted, and those in hand - to - mouth quantities. Coloreds are stagnant. Unbleached muslins also have eased. Prices quotably are unchanged, however.

Particularly dull has been trading in roofing rags, with prices moving downward. In some quarters there is hope that new Spring construction will take up the slack, while others pessimistically see cheap substitutes replacing rags.

Also lifeless is the bagging market with some price resistance reported. Demand is described as insignificant.

Latest available figures from the U. S. Department of Commerce show mill consumption for January at 28,000 short tons, 26.3 percent less than January, 1948; inventories at 59,000 short tons, 4.8 percent less than 1948's month, and a gain of 1,000 short tons over December, 1948.

Export Trade

Chile: Domestic output of 17,500 metric tons of wood pulp and 46,000 tons of paper and paperboard in 1948 would not meet total needs (estimated at 36,000 tons of pulp and 64,000 tons of paper and paperboard), the OIT learns from its reporter in Santiago.

Latest published information on imports of pulp and paper for the country shows 80 odd items, eight of which make up 20,731 tons, as shown in Table I.

Table I
Chilean Imports
Selected Pulp and Paper Items
In Metric Tons

	1946	1945	1944
Paper			
Newsprint & magazine stock	19,136	17,766	11,041
Magazine cover	433	103	NA
Unsized (Free & Grwd.)	373	202	249
Coated both sides	117	186	39
Paper: 22-150 gr.	239	195	168
Paper: over 150 gr.	125	144	128
Cigarette	143	194	117
Building board	165	362	91
Wood pulp			
Bl. Sulfite (rayon)	6,801	5,848	11,523
* Mech. or Chem. (not dyed)	180,265	141,257	123,538
All other	1,033,496	968,257	926,026

NA Not available.
* For manufacture of paper or explosives.

Potential Chilean Market

Chile's Foreign Exchange Budget for 1948 allocated $4,400,000 U.S. currency for imports of mechanical and/or chemical wood pulp for manufacture of paper, and $2,100,000 for imports of newsprint and paper for magazines and books. Foreign exchange coverage is provided at 31 pesos to the dollar. An additional $1,000,000 for paper and paperboard imports at fixed "banking rate" or 43 pesos to the dollar has been contemplated.

Import demand for pulp and paper may be expected to rise slowly for a period of four or five years, as sales gradually increase, and at an average rate of approximately 10 percent per annum. The picture will be greatly altered by the erection of a pulp mill with annual production capacity of 30,000 tons of sulphate. Proposals for construction have already been submitted to the International Bank for Reconstruction & Development by Chile's Production Development Corp., and call for investment of $4,000,000 U. S. currency. Plans were favorably recommended in a study of the project and report thereon, it is stated.

Imported newsprint and magazine paper currently is distributed under rationing. Paper for highly specialized uses and other items disadvantageous commercially (newsprint and magazine paper) probably will continue to be imported if the local manufacturer finds it is to his advantage to use his plant capacity for other items on which tariff protection and higher world prices make it possible to obtain better returns. (Tarred corrugated paper for roofing accounted for approximately 90 percent of paper and paperboard exports in 1944-47.)

Indexes

Index of general business activity for the week ended March 26 eased to 143.3 from 143.7 in the preceding week, compared with 146.3 in the corresponding week of 1948. Index of paperboard production climbed to 168.3 from 165.8 in the preceding week, compared with 191.0 in the corresponding week of 1948.

Comparative ratios of U. S. paper and paperboard production to mill capacity, as reported by AP&PA, are:

	Mar. 26 1949	Mar. 19 1949	Mar. 27 1948	Mar. 28 1947	Mar. 29 1946
Paper**	87.8	89.7	98.2	107.8	104.9
Paperboard	80.0	81.0	104.0	102.0	100.0

** Capacity in tons: 180,472; 1948, 174,668.

Paperboard Production (Tons)

	Mar. 26 1949	Mar. 19 1949	Mar 27 1948
Production	170,643	168,999	193,650
New Orders	149,388	151,534	176,395
Unfilled Orders	242,374	267,528	419,845

Percent of Activity, Current 80%; Year, 84%.

Imports

Week Ending April 2

NEW YORK

Newsprint

Pagel Horton & Co., Inc., Ranenfjord, Brevik, 1195 rolls.

Madden Reeve Angel & Co., Inc., Mormacpine, Hango, 1593 rolls.

N. Y. World Telegram, Tudor Prince, Cornerbrook, 139 rolls.

Hearst Enterprises Inc., Tudor Prince, Cornerbrook, 1070 rolls.

N. Y. Times, Tudor Prince, Cornerbrook, 1003 rolls.

Gilman Paper Co., Tudor Prince, Cornerbrook, 142 rolls.

Wall Street Journal, Tudor Prince, Cornerbrook, 196 rolls.

Filter Paper

H. Reeve Angel & Co., Inc., American Planter, London, 15 cs.

H. Reeve Angel & Co., Inc., Valacia, London, 23 cs.

H. Reeve Angel & Co., Inc., American Reporter, London, 13 cs.

Drawing Paper

H. Reeve Angel & Co., Inc., American Planter, London, 2 cs.

H. Reeve Angel & Co., Inc., Valacia, London, 2 cs.

H. Reeve Angel & Co., Inc., American Reporter, London, 4 cs.

Printing Paper

Stevens Nelson Paper Corp., American Planter, London, 2 cs.

S. H. Pomerance & Co., American Planter, London 4 cs.

Stevens Nelson Paper Corp., De Grasse, Havre, 4 cs.

S. H. Pomerance & Co., American Reporter, London, 1 cs.

Paperhangings

(———), American Planter, London, 18 bls.

C. A. Haynes & Co., American Planter, London, 25 bls., 1 cs.

Wallpaper

Hudson Shipping Co., American Planter, London, 1 cs.

American Express Co., De Grasse, Havre, 3 cs.

C. A. Haynes & Co., Media, Liverpool, 20 cs.

(———), Media, Liverpool, 29 ctns.

Stone & Downer Co., American Reporter, London, 6 cs.

Photo Paper

American Express Co., American Planter, London, 98 drums.

Lep Transport Inc., American Reporter, London, 58 cs. (base).

Wrapping Paper

Sandvik Steels Inc., Stockholm, Gothenburg, 2 cs.

Parchment Paper

George Lippelgoes, Elin Horn, Antwerp, 2 cs., 1 pkge.

Superior Paper Co., Alwaki, Antwerp, 4 cs.

Gummed Paper

B. F. Drakenfeld & Co., Media, Liverpool, 14 cs.

Tissue Paper

B. F. Drakenfeld & Co., Media, Liverpool, 14 cs.

Serviettes

A.C.O. Leather Co., American Reporter, Hamburg, 46 bls.

Napkins

H. W. Robinson & Co., American Reporter, London, 4 cs.

B. M. Heede Inc., Mormacelm, Oslo, 156 ctns.

Towels

H. W. Robinson & Co., American Reporter, London, 2 cs.

Miscellaneous Paper

(———), Arnedyk, Rotterdam, 351 rolls.

Rags, Baggings, Etc.

Glant & Co., Explorer, Bombay, 105 bls. cotton waste.

Cowa Trading Co., Explorer, Bombay, 140 bls. cotton waste.

(———), Explorer, Bombay, 84 bls. old hessian cuttings.

National City Bank, Explorer, Bombay, 175 bls. jute rags.

S. H. Waldestein, Explorer, Bombay, 458 bls. cotton waste.

Railway Supply & Manufacturing Co., Explorer, Bombay, 80 bls. cotton waste.

(———), Explorer, Madras, 100 bls. old jute rags.

A. W. Fenton Co., H. Frasch, Antwerp, 151 bls. scrap bagging.

New England Waste Co., Hesperides, Tuticorin, 100 bls. cotton waste.

(———), Mohamed El Kebir, Alexandria, 62 bls. bagging.

Midwest Waste Materials Co., Herta Maersk, Antwerp, 481 bls. scrap bagging.

American Express Co., Valacia, London, 26 bls. new grey linen threads.

Midwest Waste Materials Co., Crux, Rotterdam, 124 bls. scrap bagging.

A. de Vries Trading Corp., Elin Horn, Antwerp, 60 bls. cotton rags, 60 bls. paperstock.

McKay & Co., Elin Horn, Antwerp, 78 bls. cotton waste.

National City Bank, Ekefors, Naples, 84 bls. old bagging.

Midwest Waste Materials Co., Ekefors, Genoa, 1 ble. paperstock, 93 bls. scrap bagging.

Chase National Bank, Media, Liverpool, 27 bls. wool thread waste.

(———), Media, Liverpool, 4 bls. bagging, 16 bls. rags.

National Bank of Detroit, American Defender, Antwerp, 37 bls. scrap bagging.

Midwest Waste Materials Co., Alwaki, Antwerp, 133 bls. scrap bagging.

E. J. Keller Co., Inc., Alwaki, Antwerp, 136 bls. scrap bagging.

(———), Alwaki, Antwerp, 55 bls. old bagging.

Woodpulp

Cellulose Sales Co., Stockholm, Gothenburg, 1800 bls. dry sulphite pulp, 30 bls. kraft sulphate pulp, 1 cs. woodpulp.

Woodpulp Boards

Jay Madden Corp., Mormacpine, Hango, 202 rolls (solid white).

PHILADELPHIA

Madden Reeve Angel & Co., Inc., Mormacpine, Hango, 1361 rolls newsprint.

BALTIMORE

J. J. Rozendaal, Elin Horn, Antwerp, 37 bls. cotton waste.

NORFOLK

National City Bank, Elin Horn, Rotterdam, 88 bls. old bagging.

Chase National Bank, Hellenic Star, Genoa, 68 bls. old waste bagging.

New C. & W. Co. Home

PITTSBURGH—The Chatfield & Woods Co., plans to erect a one-story warehouse with second-story offices, in the block facing the riverfront at South Seventeenth, South Eighteenth and Merriam streets. Occupancy is scheduled for the latter part of this year. The company's present location falls within the proposed new Point Park.

Mark 50th Anniversary

NEW YORK — L. Hyman & Sons, paper merchant firm, is currently marking the 50th anniversary of the firm's founding.

Can. Subsidiaries' Tonnage

OTTAWA — International Paper Co.'s production from Canadian subsidiaries amounted to 709,528 tons of newsprint in 1948 fiscal year as against 689,273 in previous year, 200,851 tons of dissolving pulp as against 188,675 in preceding year, 50,857 tons of other sulphite pulp against 53,434, and other paper grades 5,808 tons against 5,182 tons.

Amount of capital expenditures authorized by the Canadian subsidiaries is less than the amount of anticipated depreciation and depletion reserves in 1949 and it was therefore not necessary that they segregate funds to meet these expenditures.

Under present rules of the Foreign Exchange Control Board of Canada, the Canadian subsidiaries are permitted after March 31, 1949, with the Board's approval, to pay to International Paper Co., interest and dividends to the extent of their 1948 earnings.

Bush Workers Prosper

FORT WILLIAM, Ont.—There is a good living to be made by bush workers in Canada The *Times-Journal* of this city concludes and quotes four examples from a group of Canadians who recently left a winter camp in the Thunder Pay district: A worked 128 days and earned $2,147.22, an average of $18.88 a day. B worked 122 days and earned $2,417.54, an average of $18.18 a day. C worked 118 days and earned $1,558.52, an average of $13.20 a day. D worked 125 days and earned $2,337.45, an average of $18.70 a day.

"This indicates what can be done by men skilled in the use of the axe and saw," says the newspaper.

Fessenden Heads FPBA

NEW YORK—M. G. Fessenden, of the Ace Carton Corp., Chicago, was elected president of the Folding Paper Box Ass'n. of America on March 24. New directors are: William W. Fitzhugh, of Wm. W. Fitzhugh, Inc.; Norman F. Greenway, of Robert Gair Co., Inc.; Walter F. Daley, of the New Haven Pulp & Board Co.; and W. B. Leavens, Jr., of the Wilkata Folding Box Co., Kearny, N. J.

$16,000,000 RFC Loan

KETCHIKAN, Alaska—The Ketchikan Pulp & Paper Co. has arranged for a $16,000,000 loan from the Reconstruction Finance Corp.

Mills Co. Buys Building

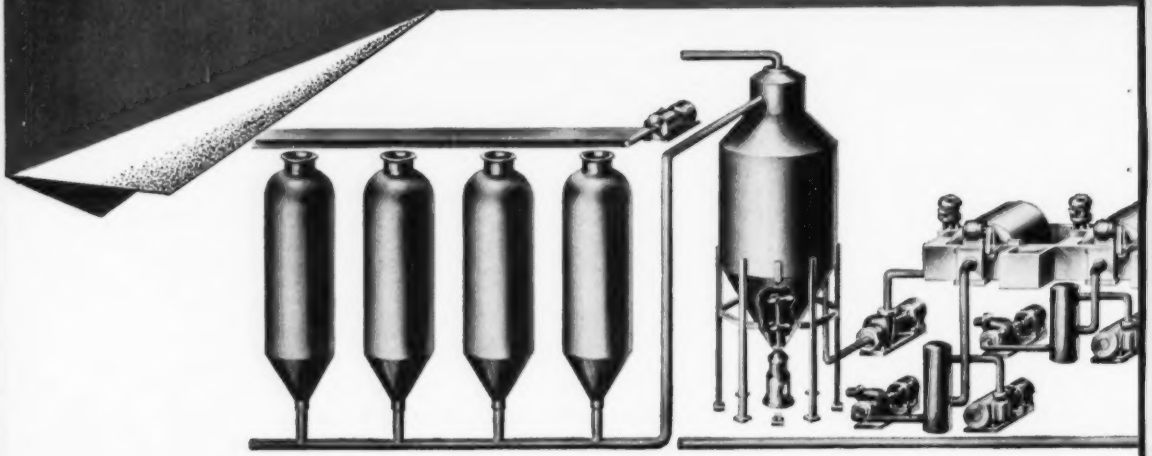
CHICAGO—The Mills Envelope Co., has bought a two-story building containing about 40,000 square feet, at 2403 Oakley avenue.

S.E.S. Firm Incorporated

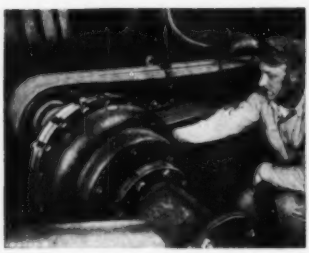
NEW YORK—S.E.S Paper Products Corp., 47-45 Thirty-Ninth street, Queens, has been incorporated by Marcel Sand.

ONE IN A SERIES: WHAT ALLIS-CHALMERS BUILDS

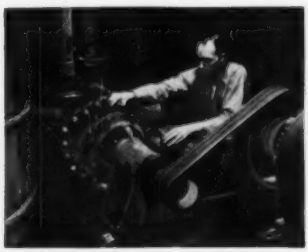
Reduce Fiber Loss,



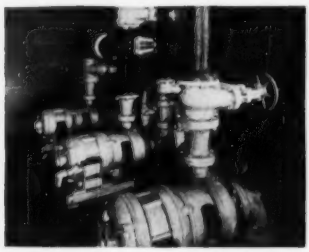
A-C EQUIPMENT FOR LOW COST PRODUCTION OF HIGH GRADE PULP AND PAPER



STOCK PUMPS — Designed specifically for handling paper stock. Seven standard sizes with capacities from 175 to 7000 gpm with heads to 200 ft.

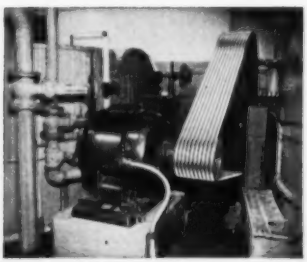


PROCESS PUMPS — In these pumps, engineers have separated parts subject to severe wear. This permits use of special alloys and non-machineable parts.

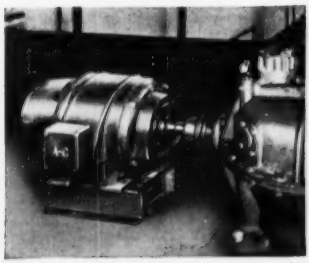


CHEMICAL PUMPS — Shown mounted with Allis-Chalmers 10 hp motors. These SSU pumps are recommended for service in chemical preparation and recovery.

PULP SCREEN — Low Head screen features positive conveying action . . . assures immediate discharge of rejects with, as a result, clean stock.



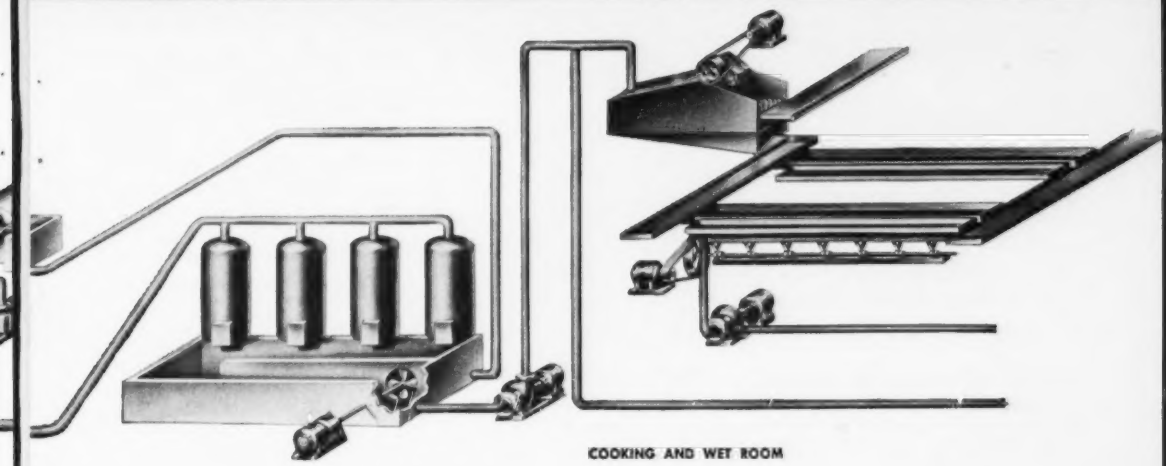
V-BELT DRIVE — Texrope V-belt drives signify economy and dependability of power transmission in applications requiring up to several thousand horsepower.



MOTORS — This 25 hp splash-proof, slip ring motor drives a tank agitator. Low maintenance Allis-Chalmers design makes these motors ideal for mill service.

FOR PULP AND PAPER

Improve Pulp Quality



COOKING AND WET ROOM

HERE are six Allis-Chalmers processing products designed to cut pulp losses, improve paper quality and increase operating efficiency:

STREAMBARKER, a hydraulic Allis-Chalmers bark remover, averages between 8 and 14 cords per hour. It saves practically 100 per cent of the fiber; saves space and hard work.

LOW HEAD CHIP SCREENS provide the clean, uniform chips needed for quality paper. Horizontal decks furnish economy of headroom. Used as *knotters,* the Low Head screens are suitable for all types of pulps, even relatively high consistences. Knotting capacity per foot is high. Horsepower requirements are extremely low per ton of pulp handled. And the adjustable spray system holds fiber loss to an absolute minimum.

PUMPS for stock, liquor and water applications furnish reliable performance with low maintenance costs. Each pump is designed to fill specific requirements in paper making. An example is the PW pump, developed for the heavy-duty requirements of stock pumping.

HI-DENSITY FEEDER is used with centrifugal stock pump to prevent air-binding when handling paper stock up to 8% bone-dry consistence.

INTERPLANE GRINDER and the **DEFIBERIZER** are important tools in waste wood utilization. Separately or in conjunction, they furnish a profitable use of waste wood in new products and processes.

And when you specify Allis-Chalmers, you get equipment with "packaged" drive—motor, Texrope belts and controls.

See the wide application of Allis-Chalmers processing equipment in the above flow sheet of the digester and wet room operation. A-C equipment serves an equally important role in the other operations of pulp and paper production.

Because many Allis-Chalmers lines are so broad—offering a maximum range of types and sizes—it's easier for you to get exactly the unit that best suits your particular job. That means top operating efficiency and economy!

WRITE FOR FREE BULLETIN

An experienced Allis-Chalmers equipment engineer will be glad to give you practical advice. Contact your nearest Allis-Chalmers district office. Meanwhile, write for the 32-page "Forest to Finished Product" booklet. Bulletin 25B6827. A 2630

ALLIS-CHALMERS, 994A SO. 70 ST.
MILWAUKEE, WIS.

Hi-Density, Low-Head, Streambarker, Interplane and Texrope are Allis-Chalmers trademarks.

A-C ALLIS-CHALMERS

ALLIS-CHALMERS

One of the Big 3 in Electric Power Equipment—Biggest of All in Range of Industrial Products

Prices

Quotations indicate trends in an open market. At the moment they can be of little more value. While some volume business still is done under contract at the figures shown, fluctuations are too varied and frequent to permit prices to be interpreted as representing a wholly stabilized market.

NEW YORK

Paper

Delivered New York

Standard News, per ton—

Rolls, contract	$100.00/ —
Sheets	115.00/ —

F.o.b. mill, varying freight allowances, Zone 1.

Kraft—per cwt., 40# base wgt.

No. 1 Wrapping	7.75/ 8.00
Standard Wrapping Rolls	7.00/ —
Standard Wrapping Sheets	7.50/ —
Standard Bag	6.50/ —
Multiwall Bag, 40# and heavier, 24x36 (500 sheets)	
Southern	7.50/ 7.75
Northern	8.85/10.15

Tissues—per ream 24x36 (480) 10/11 lbs.

Wh. No. 1 Frd.	$1.84/$2.00
Wh. No. 1 M. G.	1.94/ 2.00
Wh. No. 1½	1.65/ —
Wh. No. 2	1.45/ 1.55
Kraft Anti-Tar	1.65/ —
Kraft Unbl.	1.85/ —
Shred. Wh. No. 1 per lb.	.12½/ .18

Toilet—per case of 100 rolls—1 M sheets.

Unbleached 4½x4½	$7.20/ —
Unbleached 4½x5	8.85/ —
Bleached 4½x4½	8.00/ —
Bleached 4½x5	8.45/ 8.80
Per Case of 50 rolls—1500 sheets	
Unbleached 4½x4½	$5.70/ —
Per Case of 50 rolls—2000 sheets	
Unbleached 4½x4½	$6.95/ —
Bleached 4½x4½	7.70/ —

Paper Towels—per case of 3750—Zone 1.

Wh. Jr. M'tif'd 9¼x9½	$5.45
Br. Sr. M'tif'd 10x12	3.80
Br. Jr. M'tif'd 9½x9¼	3.30
Br. Jr. Sgl. fold 10x10¼	3.35

Manila, per cwt.

No. 1 Jute Tag, sheets*	$15.05/ —
Reg. Jute M.F. Manila, sheets*	13.50/ 15.50
No. 1 Manila Wrapping	8.75/ 10.50
Printing Manila	10.00/ 11.00

* Less usual allowance for rolls.

Boards, per ton—

Filled News	$80.00/$82.50
Plain Chip	80.00/ —
Bldd. Mla. L-d. Chip*	102.50/105.00
White Fat. coated*	120.00/
Kraft Liners 42 lb.	105.00/
Kraft Corr. .009	110.00/
Binders Boards	120.00/126.00

* Base Prices per 10 tons. Less than 10 tons but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

The following prices are representative of distributors' resale prices, all deliveries in Zone 1:

Rag Content Bonds and Ledgers—

White, 20 lb.

Bonds,

	Case
100% Rag Ex. No. 1	$51.40/$53.90
100% Rag	44.55/ 46.15
75% Rag	33.90/ 35.40
50% Rag	28.10/ 29.55
25% Rag	24.85/ 26.80

Ledgers,

	Case
100% Rag Ex. No. 1	$52.65/$54.55
100% Rag	45.65/ 46.40
75% Rag	35.15/ 35.80
50% Rag	29.40/ 30.05
25% Rag	26.15/ 26.80

Sulphite Bonds and Ledgers

White, 20 lb.

Bonds,

	Case
No. 1	$18.35/ —
No. 2	17.50/ 18.80
No. 4	16.80/ 17.45

Ledgers,

	Case
No. 1	$19.65/ —
No. 2	18.80/ —
No. 4	18.10/ —

White Book,

Conversion Coated

	Case
No. 1	$20.75/$20.90
No. 2	19.50/ 19.65
No. 3	18.15/ 18.90

Machine Coated

No. 1	16.65/ 17.15
No. 2	14.90/ 16.50

Uncoated

No. 1 Antique (Watermarked)	16.40/ 17.90
Offset	16.15/ 17.15
A Grade E. F.	15.40/ —
A Grade S. C.	15.90/ 16.15
B Grade E. F.	14.90/ 15.15
B Grade S. C.	15.40/ 15.65

Twines

All Prices Nominal, F.o.b. Mill

(Soft Fiber)

Coarse Polished—India	.35½/ .36½
Fine Polished India	.41½/ .43
Unpolished—Paper Makers	.32¾/ .34½
Tube Rope	.33¾/ .35½
Wrapping	.36 / .38¾
Cotton	.58 / .60
Polished Cotton	.55 / —

(Hard Fiber)

Mex. Sisal	.21 / .27
Manila (Reprocessed)	.31 / .33

(American Hemp)

Polished Hemp	.46½/ .48
Unpolished	.35 / .37¼

World Wood Pulp Markets at a Glance

Second Quarter Contract Prices, Per Short Air-Dry Ton

	Delivered, with varying freight allowances		On dock Atlantic Ports Varying freight allowances		
	U. S.	Canadian	Swedish	Finnish	Norwegian
Groundwood	$80.00/ —	$75.00/ 80.00			
Sideruns Pulping News		80.00/ 90.00			
Soda, Bleached	125.00/ —	125.00/ —			
Sulphate, Bleached	$132.50/136.00	136.00/140.00	†136.00/140.00		
Sulphate, Unbl'd North'n	105.00/ —	105.00/112.50	†105.00/112.50	112.50/ —	
Sulphate, Unbl'd South'n	95.00/ —				
Sulphite Blchd. (S'ftw'd)	126.00/130.00	130.00/135.00	†130.00/132.50	132.50/ —	*125.00/140.00
Sulphite, Blchd. (H'dw'd)	125.00/ —				
Sulphite, Unbleached	115.00/118.00	118.00/ —	*110.00/118.00	†122.50/ —	
Sulphite, Unbl'd (Glassine)	121.50/ —	125.00/ —	†122.00/127.50	126.50/ —	

‡ Southern. * Flat: no freight allowed. † Full freight allowed.

Waste Paper Market

Prices to Mills. Quotations Nominal

F.O.B. Shipping Point (Per Ton)

	New York Mar. 22	Philadelphia Apr. 4	Boston Apr. 1	Chicago Feb. 1
No. 1 Hd. Wht. Env. Cuts	$95.00/100.00	$90.00/$95.00	$90.00/105.00	$90.00/100.00
No. 1 Hd. Wht. Shvs., unr'l'd	80.00/ 85.00	70.00/ 75.00	80.00/ ——	80.00/ ——
Super Soft Whit. Shvs.	80.00/ 85.00	80.00/ 85.00	80.00/110.00	75.00/ ——
No. 1 Soft Wht. Shvs.	60.00/ 65.00	60.00/ 65.00	70.00/ 80.00	55.00/ ——
No. 1 Fly Leaf Shvs.	40.00/ ——	18.00/ 20.00	35.00/ 40.00	35.00/ ——
No. 1 Gdwd. Fly Leaf Shvs.	20.00/ 30.00	14.00/ 16.00	25.00/ ——	45.00/ ——
No. 1 Heavy Books & Mag.	17.00/ 19.00	10.00/ 12.00	22.00/ 23.00	23.50/ ——
Mixed Books	9.00/ 11.00	7.00/ 8.00	12.00/ ——	9.00/ ——
No. 1 Wht. Ledger	35.00/ 40.00	30.00/ 35.00	45.00/ 50.00	
Colored Ledger	30.00/ 32.50	20.00/ 25.00	37.50/ ——	30.00/ 31.00
Manila Tab. Cards	50.00/ 55.00	55.00/ 60.00	65.00/ 75.00	65.00/ ——
New Manila Env. Cuts	60.00/ 70.00	60.00/ 65.00	60.00/ 70.00	70.00/ ——
Extra Manilas	20.00/ 25.00	20.00/ 25.00	30.00/ 35.00	30.00/ 35.00
Mxd. Kraft, Bag Cuts	45.00/ 55.00	45.00/ 50.00	70.00/ ——	60.00/ ——
Kraft Envelope Cuts	60.00/ 65.00	60.00/ 65.00	70.00/ 75.00	65.00/ ——
Trpl. Std. No. 1 Brn. Sft. Kraft	30.00/ 35.00	30.00/ 32.00	40.00/ 45.00	40.00/ ——
New Kraft Corr. Cuts	25.00/ 30.00	25.00/ 30.00	45.00/ ——	55.00/ ——
No. 1 Asstd. Old Kraft	25.00/ 30.00	20.00/ 25.00	25.00/ ——	20.00/ ——
Used Kraft Bags	25.00/ 30.00	14.00/ 18.00	30.00/ ——	35.00/ ——
New Jute Corr. Cuts	18.00/ ——	18.00/ 20.00	16.00/ ——	17.00/ 18.00
Old Corrugated	12.00/ 13.00	9.00/ 10.00	10.00/ 11.50	14.00/ ——
No. 1 News	10.00/ 12.00	6.00/ 8.00	—— / 9.00	—— / 15.00
No. 1 Mixed Paper	4.00/ 5.00	3.00/ 5.00	4.00/ 6.00	7.00/ ——
Box Board Cuts	6.00/ 7.00	3.00/ 4.00	10.00/ ——	10.00/ ——
White Blank News	55.00/ 60.00	60.00/ 65.00	—— / 60.00	45.00/ ——
Overissue News	12.00/ 14.00	8.00/ 10.00	11.00/ 12.00	18.00/ ——
Sulphite Mill Wrappers	12.00/ 14.00	6.00/ 8.00	15.00/ ——	12.00/ ——

Rag Market

New Domestic Cotton Cuttings

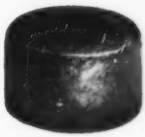
(Prices to Dealers, F.o.b. Ship. Pt.)

	Per 100 lbs.
White Shirt	$10.00/ $10.50
Unbleached Muslin	10.00/ 10.50
Light Silesias	7.00/ 7.50
White Back Blue Overalls	6.25/ 6.50
Blue Overalls	6.00/ 6.25
Fancy Shirt	4.50/ 5.00
Percales	5.50/ 6.00
Light Prints	5.50/ 6.00
No. 1 Washables	3.00/ 3.25
Bleachable Khaki	5.00/ 5.50
Unbleachable Khaki	4.50/ 5.00
Cottonades	4.25/ 4.75
Lt. Flannelettes	7.00/ 7.50
Men's Corduroy	3.50/ 4.00
Women's Corduroy	3.00/ 3.50

(Continued on page 38)

Toothed Lock Washer: Prevents loss of stem nut due to vibration, thereby holding the handwheel securely.

Newly Designed Handwheel: Air-cooled, finger grip handwheel affords sure grip even with greasy gloves.



Improved Packing: Molded packing of lubricated asbestos reinforced with copper wire. Suitable for practically every service. Valves can be repacked under pressure.

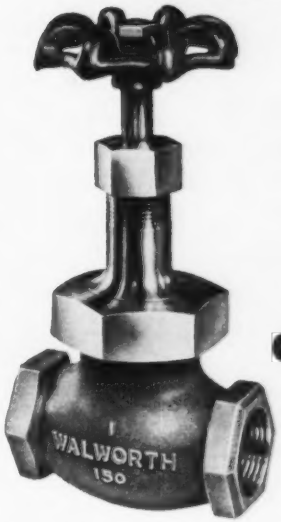
Hexagonal Union Bonnet Connection: Eliminates any chance of distortion or leakage even though valve is repeatedly taken apart and assembled.

New Cylindrical Disc Holder: The design of the top portion of the disc holder keeps the disc accurately guided under all operating conditions.

Renewable Asbestos Disc: This disc is suitable for steam up to 500F and is resistant to oil, gasoline, and many chemicals at atmospheric temperatures. Discs for special services are available.

Extra Strong Body: Made of Composition M (ASTM B61) bronze thick enough to provide a high safety factor. Valves undergo hydrostatic shell test of 450 psi.

WALWORTH



IMPROVED
No. 95
BRONZE
GLOBE VALVE

also available in Angle Type (No. 96)

The service ratings of the Walworth No. 95 are 150 pounds per square inch steam at 500F, and 300 pounds per square inch non-shock cold water, oil, and gas. In the manufacture of this quality bronze valve, more than 47 gages are used in machining parts to micrometric accuracy, thus insuring interchangeability of parts. For further information see your local Walworth distributor, or write: Walworth Company, 60 East 42nd St., New York 17, N. Y.

note these 7 Great Features

WALWORTH
valves and fittings

60 EAST 42nd STREET NEW YORK 17, N. Y.

DISTRIBUTORS IN PRINCIPAL CENTERS THROUGHOUT THE WORLD

Prices

CONTINUED FROM PAGE 36

Old Domestic Cotton Rags

(Prices to Dealers, F.o.b. Ship. Pt.)

	Per 100 lbs.	
No. 1 Whites, Repacked	$4.25/	$4.75
No. 1 Whites, Miscellaneous	3.50/	4.00
No. 2 Whites, Repacked	2.75/	3.00
No. 2 Whites, Miscellaneous	2.00/	2.25
Cotton Pants & Overalls	2.75/	3.00
Thirds and Blues, Repacked	2.25/	2.50
No. 1 Roofing Rags	1.40/	1.50
No. 2 Roofing Rags	1.25/	1.35
No. 3 Jute Bagging	.95/	1.05
No. 4 Brussels & brd. Bck'd crpts.	.90/	1.00
Roofing Bagging	.80/	.95

New Foreign Cotton Cuttings

(Prices to Dealer, F.o.b. Dock, N. Y.)

	Per 100 lbs.
New Dark Cuttings	
New Mixed Cuttings	
Light Silesias	prices
Light Flannelettes	
New White Cuttings	are
New Unbleached Cuttings	
Fancy Shirt Cuttings	nominal
Light Prints	
Bleachable Khaki, No. 1	
Unbl. Khaki, No. 1	

Old Foreign Rags

(Prices to Dealer, F.o.b. Dock, N. Y.)

	Per 100 lbs.
No. 1 White Cottons	
No. 2 White Cottons	
No. 3 White Cottons	
No. 4 White Cottons	prices
Extra Light Prints	
Old Light Prints	
Med. Light Prints	are
Dutch Blue Cottons	
Checks and Blues	
Linsey Garments	nominal
Dark Cottons, European	
Dark Cottons, Egyptian	
Old Shopperies	
New Shopperies	

Bagging

(Prices to Dealers, f.o.b. N. Y.)

	Per 100 lbs.	
Foreign Gunny, No. 1	$7.50/	$8.00
Domestic Gunny, No. 1	7.50/	8.00
Heavy Wool Tares	6.50/	7.00
No. 1 Scrap Bagging	4.75/	5.00
Foreign Manila Rope	5.50/	5.75
Domestic Manila Rope	5.50/	5.75
Jute Strings	6.25/	6.50
No. 1 Sisal Strings	5.00/	5.25
Mixed Strings	1.15/	1.30

PHILADELPHIA

Domestic Rags (new)

(F.o.b. Eastern Shipping Point)

	Per 100 lbs.	
White Shirt	$10.25/	$10.50
Light Silesias	6.75/	7.00
Unbleached Muslin	10.00/	10.25
Light Prints	5.25/	5.50
Washable No. 1	3.00/	3.50
Blue Overall	6.00/	6.25
Percales	5.50/	5.75
Unbleachable Khaki	4.00/	4.25
Bleachable Khaki	5.25/	5.50
Men's Corduroy	4.25/	4.50
Ladies' Corduroy	4.00/	4.25
Cottonades	4.25/	4.50
Fancy Shirts	5.25/	5.50

Domestic Rags (old)

(F.o.b. Eastern Shipping Point)

	Per 100 lbs.	
Mixed White	$3.75/	$4.00
Thirds and Blues Repacked	2.50/	2.65
Cotton Pants & Overalls	3.00/	3.25
No. 1 Roofing Stock	1.15/	1.25
No. 2 Roofing Stock	1.10/	1.15
Roofing Bagging	.85/	.90

Bagging

(F.o.b. Eastern Shipping Point)

	Per 100 lbs.	
Old Manila Rope	$5.50/	—
Foreign Gunny No. 1	8.00/	—
Domestic Gunny No. 1	8.00/	—
Sisal Strings No. 1	3.75/	—
No. 1 Scrap	5.50/	—
No. 1 Jute Rope	6.00/	6.50

BOSTON

Bagging

(F.o.b. Boston)

	Per 100 lbs.	
Foreign Gunny	7.50 /	8.00
Domestic Gunny	8.25 /	850.
Domestic No. 1 Old Rope	6.00 /	6.25
Foreign No. 1 Old Rope	6.50 /	—
Mixed Strings	1.35 /	—
Transmission Rope—Domestic	3.00 /	3.50
Jute Carpet Threads	— /	4.00
Bleachery Burlap	— /	9.00
Scrap Burlap—		
Foreign	6.25 /	6.75
Domestic	— /	7.75
South America	8.25 /	8.50
Austr. Wool Pouches	8.25 /	—
New Zealand Wool Pouches	— /	7.80
New Burlap Cuttings	8.50 /	—
Heavy Baling Bagging	— /	7.50
Paper Mill Bagging	— /	6.75

Domestic Rags (New)

(F.o.b. Boston)

	Per 100 lbs.	
New Light Prints	5.75 /	6.00
Fancy Percales	6.00 /	6.25
White No. 1 Shirt	10.25 /	10.75
Light Flannelettes	— /	7.00
Canton Flannels, Bleached	— /	9.00
Underwear Cutters, Bleached	10.75 /	11.00
Underwear Cutters, Unbleached	10.00 /	10.25
Blue Overalls	6.25 /	6.75
Soft Unbleached	10.00 /	10.75
Blue Cheviots	6.00 /	6.50
Fancy Shirt	5.00 /	5.25
Washable	3.25 /	3.50
Khaki Cuttings	5.00 /	5.25
Men's Corduroy	4.50 /	—
Khaki Canvas	— /	5.50
B. V. D. Cuttings	10.00 /	10.25

Domestic Rags (Old)

(F.o.b. Boston)

	Per 100 lbs.	
No. 1 Whites, Repacked	$3.50 /	$4.00
No. 1 Whites, Miscellaneous	3.00 /	3.50
Twos and Blues, Repacked	/	2.00
Cotton Pants & Overalls	2.75 /	3.00
No. 1 Roofing Stock	— /	1.30
No. 2 Roofing Stock	— /	1.20
Roofing Bagging	— /	.90

Markets

Blanc Fixe

Supply ample. Prices firm. Currently quoted at $85.00 in bags, car lots, at works, 6 cents per pound, l.c.l., deld. By-product supply somewhat restricted. Quoted at $77.50 per ton, car lots, at works, 6 cents per pound, l.c.l., deld.

Bleaching Powder

Steady improvement in supply. Demand and prices steady. Prices range from $4.25 to $4.75 per 100 pound drums, l.c.l., works.

Casein

Domestic price declines further, despite heavy U. S. purchases of milk powder. Demand dull. Current prices on processed acid precipitated casein at 21 to 26 cents per pound for domestic grades and 21 to 22½ cents for imported grades, f.o.b. shipping point.

Caustic Soda

Demand eased. Supply adequate for prompt shipment. Prices firm. Solid caustic is reported at $3.05 per cwt. flaked and ground is quoted at $3.45 per cwt., in 400 pound drums, $3.95 per cwt. in 100 pound drums—car lots at works; liquid 50 percent in tank cars at $2.40 per cwt.; liquid 73 percent in tank cars at $2.50 per cwt., at works.

China Clay

Demand easier, supply of domestic and imported ample. Prices firm. Domestic filler quoted at $10 to $12.50 per ton, car lots, f.o.b. mines. Coating clay is $15 to $25. Imported clay quotation, short tons, $16 to $35, export warehouse.

Chlorine

Supply condition favorable. Demand moderately strong. Prices firm. Currently quoted at $2.40 per cwt. in single unit tank cars; at $2.70 to $3.90 per cwt. in multi-tank cars, f.o.b., works.

Rosin

Trading deferred until loan situation jells. Demand disappointingly dull. Price falls below loan level. Gum rosin in drums per 100 pounds net in car lots, f.o.b., Savannah; B, G, H, I, K, $5.70, Savannah; B, $4.25; FF, $5.65.

Rosin Size

Supply good. Demand steady. Seventy percent gum and pale wood grades, tank cars, $5.00 to $5.10, f.o.b. southern shipping point.

Salt Cake

Easing of demand and steady production brings ample supply condition. Prices steady. Domestic quoted at $27.00, f.o.b. shipping point, freight allowed to destination.

Soda Ash

In free supply. Demand easier. Prices firm. Current prices, car lots per 100 pounds; in bulk, $1.15; in paper bags, $1.40; and in barrels, $1.90.

Sodium Bicarbonate

Supply ample. Demand good. Prices firm. Reported at $1.95 per cwt. paper bags, carload lots.

Starch, Corn

Demand fair. Supply and delivery good. Pearl grade quoted at $4.67 per 100 pounds; powdered starch at $4.78 per 100 pounds; car lots, f.o.b. Chicago.

Starch, Potato

Brisk paper mill demand. Maine price firmed by Govt. purchases. Supply in Maine ample. Idaho limited. High grade quoted at $4.75 cwt. f.o.b. Idaho; $5.00 f.o.b. Maine; Pearl grade, $4.50/$4.75 cwt. f.o.b. Maine.

Sulphate of Alumina

Supply good. Demand steady. Prices firm. The commercial grades are quoted from $1.50 per 100 pounds, in bags, car lots, f.o.b. works. Iron free is $2.50 per 100 pounds in bags, car lots, at works.

Sulphur

Demand sustained at good level. Supply good. Prices firm. Annual contracts are quoted at $18 per long ton, f.o.b. mines; $19.50, f.o.b. vessels, Gulf ports. Export price f.o.b. Gulf ports is $22.00 per long ton.

Talc

Prices steady. Demand continues ahead of supply. Improvement due this year. Domestic grades are currently quoted at $23 per ton in paper sacks, f.o.b. mills; Canadian at $35 and up per ton. All prices in car lots.

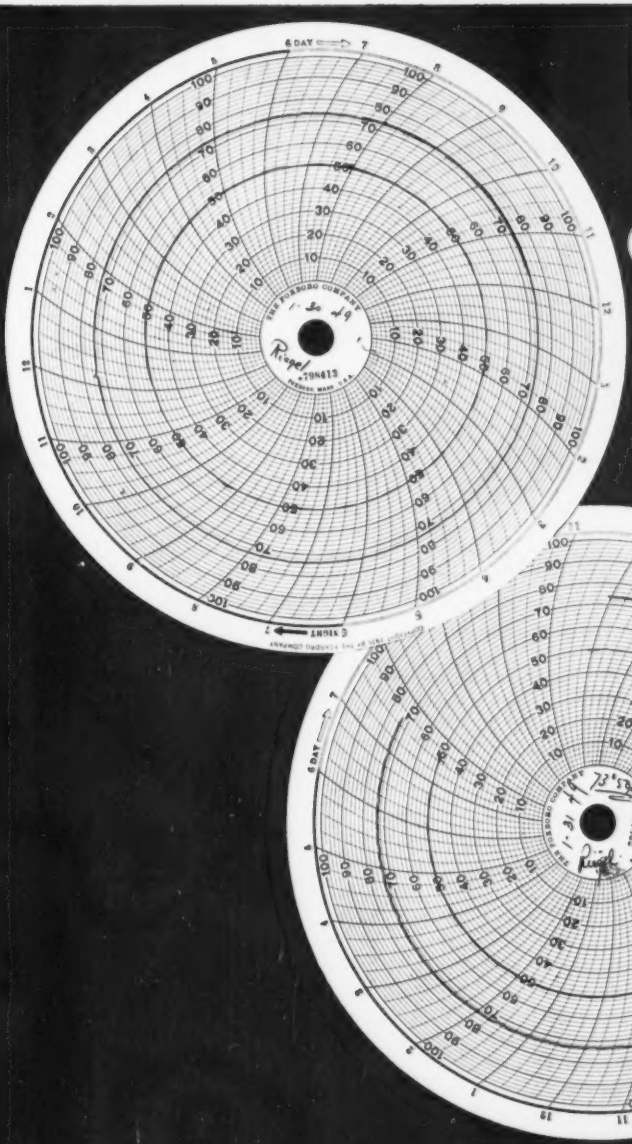
Tapioca Flour

Supplies tighter on all grades. Demand fair. Prices steady. Superior high range from $10.25/$11.50 cwt.; high grades $9.25 cwt., on dock Atlantic and Gulf ports; medium grades range from $6.00/$7.50 cwt. on dock, N. Y. Coarse pearl grades, $5.00/$5.50 cwt. on dock N. Y.

Titanium Dioxide

Supply reported now in balance with eased demand. Prices firm. Anastase 19½c pound carload lots, 20c l.c.l., rutile, 21½c pound carload lots, 22½c l.c.l.; 50-pound bags, f.o.b. plant, actual freight allowed.

ROSS AIR CONDITIONING



ACTUAL CHARTS OF CONSTANT TEMPERATURE AND HUMIDITY ROOMS AT RECENT INSTALLATION OF RIEGEL PAPER CORPORATION, MILFORD, N. J.

ROSS SYSTEMS

J. O. ROSS ENGINEERING CORPORATION

MANUFACTURERS OF AIR PROCESSING SYSTEMS

350 MADISON AVENUE NEW YORK 17, N. Y.

201 N. Wells Street, CHICAGO-6 • 79 Milk Street, BOSTON-9 • 9225 Grand River Avenue, DETROIT-4 • 600 St. Paul Avenue, LOS ANGELES-14

ROSS ENGINEERING OF CANADA, LIMITED, MONTREAL 19, CANADA • CARRIER ROSS ENGINEERING COMPANY, LIMITED, LONDON, ENGLAND

UNDERWRITERS
DEALERS
BROKERS

Industrial, Utility, Railroad Bonds

Preferred and Common Stocks

•

KIDDER, PEABODY & CO.

Founded 1865

Members
New York and Boston Stock Exchanges and New York Curb Exchange

NEW YORK BOSTON
PHILADELPHIA CHICAGO

Sales and Branch Offices

Albany Newport
Altoona Providence
Baltimore Reading
Lowell Scranton
Minneapolis Springfield
New Bedford Wilkes-Barre

New York Teletype NY 1-193

Financial Record

	Per Share Earnings		Indic.	April 5
Preferred Stocks	Calendar Year 1947	Calendar Year 1948	Annual Divid. Rate	Approx. Market Price
Armstrong Cork Co. $3.75 Cum.	$38.64*	$46.33*	$3.75	97
Armstrong Cork Co. $4.00 Cum. Conv.	38.64*	46.33*	4.00	107¾
Celotex Corp. 5% Cum.	24.25c	21.22g	1.00	17¾
Champion Paper & Fibre $4.50 Cum.	65.90f	61.80j	4.50	93½
Container Corp. of Amer. 4% Cum.	102.74	105.41	4.00	97⅛
Crown Zellerbach $4.20 Cum.	56.40f	63.54g	4.20	96½
Crown Zellerbach $4.00 Cum. Conv. 2nd	53.96f*	60.21g*	4.00	94⅜
Dixie Cup Co. $2.50 Cum. Conv. Cla	9.16	10.10	2.50	49
Flintkote Co. $4 Cum.	81.91	83.25	4.00	100¼
Robert Gair Co., Inc. 6% Cum.	20.11	17.08	1.20	16¾
International Paper Co. $4 Cum.	236.51	263.00	4.00	97⅛
Johns-Manville $3.50 Cum.	128.81	209.89	3.50	108
Kimberly Clark Corp. 4½% Cum.	70.03	80.74	4.50	103½
Kimberly Clark Corp. 4% Cum. Conv. 2nd	41.60*	41.59*	4.00	98
MacAndrews & Forbes 6% Cum.	62.20	59.89m	6.00	136½
Mead Corp. 4¼% Cum.	81.56	73.46	4.25	76⅛
Mead Corp. 4% Cum. Conv. 2nd	33.30*	29.91*	2.00	33¼
Paraffine Cos. Inc. 4% Cum. Conv.	152.76a	156.11	4.00	103¼
Rayonier Inc. $2 Cum.	13.58	16.43	2.00	31¾
St. Regis Paper Co. 4.40% 1st A	76.93	79.90	4.40	83
Scott Paper Co. $3.40 Cum.	43.95	59.06	3.40	94½
U. S. Gypsum Co. 7% Cum.	211.34	314.45	7.00	180⅞
United Wallpaper Inc. 4% Cum. Conv.	(d)1.35a	(d)0.79	2.00	23½
West Virginia Pulp & Paper 4½% Cum.	75.75c	81.01g	4.50	105½
Common Stocks				
APW Products Co.	$1.24	$0.73	$0.25	4
American Writing Paper Corp.	1.61	(d)0.15	0.25	5½
Armstrong Cork Co.	6.41	7.54	3.00	44⅜
Celotex Corp.	6.59c	5.73g	2.00	21¾
Certain-Teed Prods. Corp.	3.75	4.02	1.15	12
Champion Paper & Fibre	5.57f	6.09j	2.00	21⅞
Congoleum Nairn Co.	4.55	5.78	2.25	29⅛
Container Corp. of America	10.09	10.12	4.50	35⅛
Crown Zellerbach	6.81f	7.26g	2.00	25¼
Dixie Cup Co.	5.87	6.70	1.00	27⅝
Eastern Corp.	5.02	4.76	1.00	13⅜
Flintkote Co.	6.27	5.86	2.50	27⅛
Robert Gair Co., Inc.	3.18	2.67	0.70	6½
Great Northern Paper Co.	4.56	4.63	2.80	35¾
International Paper Co.	15.02	16.73	5.00	49⅛
Johns-Manville Corp.	3.17	5.22	2.00	36⅜
Kimberly-Clark Corp.	4.29	5.02	1.65	19⅞
MacAndrews & Forbes Co.	3.68	3.53m	2.50	33
Marathon Corp.	3.39e	4.68g	1.40	20¼
Mead Corp.	7.33	6.36	2.00	16⅜
National Container Corp.	4.13	2.28	0.80	7½
Paraffine Cos. Inc.	2.40g	2.45	1.20	17
Rayonier, Inc.	7.30	9.09	2.00	25⅞
Ruberoid Co.	9.89	11.80	3.25	49½
St. Regis Paper Co.	2.66	2.71	0.80	8¼
Scott Paper Co.	3.02	4.15	2.50	49
Sutherland Paper Co.	6.87	6.02	2.50	32⅛
Taggart Corp.	1.29	1.08	0.60	10⅝
Union Bag & Paper Corp.	7.93	9.17	4.00	28⅞
United Board & Carton	4.95b	0.73h	(e)	6¼
U. S. Gypsum Co.	10.00	15.04	6.00	101
United Wallpaper	(d)0.11a	(d)0.10	(n)	3½
West Virginia Pulp & Paper	11.40e	11.51g	4.00	37

(a) Year ended 6/30/48
(b) Year ended 5/30/48
(c) Year ended 10/31/47
(d) Deficit
(e) Omitted dividend 2/4/49
(f) Year ended 4/30/48
(g) 12 months to approximately 1/31/49
(h) 12 months to 2/5/49
(j) 8 months to 12/31/48
(m) 12 months to approximately 9/30/48
(n) Last payment 25c, 9/16/47
(*) Earnings per combined preferred shares.

Dividends Declared

OTTAWA—*Dryden Paper Co., Ltd.*, has declared a dividend of 30 cents per share, payable May 2 to shareholders of record March 31.

Bathurst Power & Paper Co., Ltd., has declared a quarterly dividend of 37½ cents per share, plus an extra dividend of 12½ cents per share, on its outstanding Class "A" stock, payable June 1 to holders of record May 4.

St. Lawrence Paper Mills Co., Ltd., has declared a dividend of $1.50 per share on its outstanding first cumulative redeemable preferred shares; 60 cents per share on its outstanding second cumulative redeemable preferred shares, and 50 cents per share on its outstanding common stock, all payable April 25 to holders of record April 4.

St. Lawrence Corp., Ltd., has declared a dividend of 50 cents per share on its first cumulative convertible preferred stock and 18¾ cents per share on its second cumulative preferred stock, payable April 25 to holders of record April 4.

Donnacona Paper Co., Ltd., has declared dividend of $1.25 per share on its cumulative convertible redeemable preferred stock, for the quarter ending May 15, payable May 13 to holders of record April 15.

Linweave Meeting Apr. 2

NEW YORK — The 19th Linweave annual meeting at the Waldorf-Astoria Hotel, April 2, brought together about 100 representatives of the 68 fine paper houses handling Linweave papers and envelopes.

Following meetings of the Advisory and Merchandising Committees on April 1, the Linweave Merchants' meeting took place Saturday morning, April 2, and was followed by luncheon and a mill program presented by the Kellogg Division of the U.S. Envelope Co.

At the Merchants' meetnig the following committees were appointed for the coming year:

Advisory Committee: T. C. Price, Barton, Duer & Koch Paper Co., Baltimore, chairman; F. P. Leslie, Jr., John Leslie Paper Co., Minneapolis, secretary; J. W. Zimmerman, Standard Paper Co., Cincinnati; W. N. Stetson, Jr., Storrs & Bement Co., Boston; H. S. Hundley, B. W. Wilson Paper Co., Richmond, Va.; and V. E. Hecht, Zellerbach Paper Co., San Francisco.

Merchandising-Advertising Committee: J. D. Wihlams, D. L. Ward Co., Philadelphia, Chairman, Merchandising; C. V. Morris, Reinhold-Gould, Inc., New York City, Chairman, Advertising; J. D. Bligh, Barton, Duer & Koch Paper Co., Washington; G. Forrest Gillett, Chicago Paper Co., Chicago; R. G. Guimaraes, Rowland Paper Co., Louisville; and H. J. Foulds, Alling & Cory Co., Rochester, N.Y.

17,052 Shareholders

OTTAWA—As of December 31, the Consolidated Paper Corp., had 17,052 shareholders, 49 percent of them owning no more than 25 shares and 84 percent owning not more than 100 shares each. This wide distribution of the company's stock covers shareholders in Canada (83.8 percent); British Isles (10.7 percent); United States (4.4 percent); and other countries (1.1 percent).

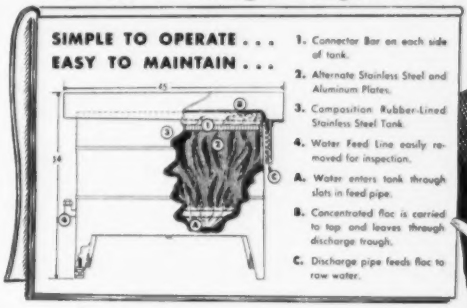
For Industrial And Municipal Water Treatment Plants

Alhydro FLOC PRODUCER

FOR MORE EFFICIENT WATER CLARIFICATION

with

Reduced Handling & Freight Costs

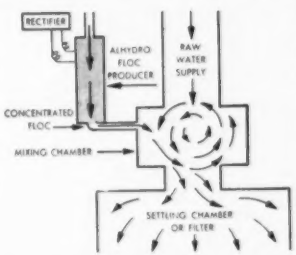

SIMPLE TO OPERATE . . .
EASY TO MAINTAIN . . .
1. Connector Bar on each side of tank.
2. Alternate Stainless Steel and Aluminum Plates.
3. Composition Rubber-Lined Stainless Steel Tank.
4. Water Feed Line easily removed for inspection.
A. Water enters tank through slots in feed pipe.
B. Concentrated floc is carried to top and leaves through discharge trough.
C. Discharge pipe feeds floc to raw water.

The ALHYDRO unit produces concentrated aluminum hydroxide floc by low voltage electrolytic decomposition of easily replaced aluminum plates. Alhydro helps erase your chemical storage and handling problems by using only 69 lbs. of aluminum to treat as much water as nearly ¾ ton of ordinary coagulants. Alhydro reduces freight costs, too, no heavy, bulky chemicals need be shipped to your plant. Of course, the necessity for chemical feeders is completely eliminated.

These are additional advantages: Easily controlled production of completely stable floc . . . efficient coagulation regardless of water temperature, clarity or pH over a wide range.

One Alhydro unit will treat an average of 300,000 gallons of water a day. The units may be installed singly or in multiples.

This installation of ALHYDRO FLOC PRODUCER in your water treatment plant . . .



Produces better water at competitive cost . . . Usually eliminates need for conditioning or correcting water before or after treatment . . . Offers simplicity of operation . . . Minimizes storage problems . . . Gives easily controlled floc concentration

DESCRIPTIVE FOLDER - - FREE!

This folder describes and illustrates the operational advantages of the Alhydro Floc Producer. See how you can simplify the treatment of drinking water or water for industrial use. Write for free copy today.

ALHYDRO, INC. DEPARTMENT 4C
516 N. CHARLES ST., BALTIMORE 1, MD.

Army-Navy

N. Y. Purch. Office

Army Bids Received

Nine (9) bids have been received on:

QM-30-280-49-1047 covering Item 1—Tape, Blank-Recording, Teletype ½" wide, white, OD roll 2" ID, Fiberboard Cores; oiled, w/end of tape signal U/W, Teletype perforator—Dist. Set; and Item 2—Paper, Recording, for telegraph: 5" wide x 8" long, 36# sub, canary yellow, blank; 500 sheets per pkg., approx. 50% chemical wood fiber. Directive quantity Item 1—970,000 each; Item 2—38,000 each. Total quantity on all bids received: Item 1—5,050,000 each; Item 2—114,000 each. Price ranges from: $.20 to $.3488. This procurement is for the U. S. Army.

Army Awards Made

Seven (7) awards have been made on:

QM-30-280-49-768 covering Ribbons, Typewriter and Computing Machine, to:

Cameron Mfg. Co., Dallas, Texas—121,252 each (various makes): from $.235 to $.24.

U. S. Typewriter Ribbon Mfg. Co., Phila., Pa.—10,000 each: from $.15 to $.155.

Stenno Ribbon & Carbon Mfg. Co., Portland, Oregon—11,400 each @ $.20.

Allied Carbon & Ribbon Mfg. Co., New York City—1,600 each: from $.2025 to $.21.

Allen & Co., New York City—289 each @ $.205.

Hell-Hawkins Co., Agent for H. M. Storms Co., Bklyn, N. Y.—339 each @ $.185.

Kay Ribbon & Carbon Co., New Brunswick, N. J.—1,200 each: from $.23 to $.24. Directive quantity was: 133,300 each. This procurement is for the U. S. Army.

Four (4) awards on:

QM-30-280-49-787 covering Bags, Cellophane, and Interior Packaging, to:

Old Dominion Paper Co., Norfolk, Va.—50,000 each (Cellophane, Meat-Bag w/lip; Size 8" x 6") @ $.01638. 210,000 each (Cellophane, Meat-Bag w/lip, size 8" x 6") @ $.0444.

Cadillac Products, Inc., Ferndale, 20, Mich.—25,000 Bags, Interior, Packaging Metal foil paper back, 9¾ x 19½" @ $.0617. 20,000 (same as above 16 x 16") @ $.08144. 15,000 (same as above 22¾ x 15½") @ $.409.

United Mineral & Chemical Corp., New York City—5,000 each Bags, Interior Packaging, 10 x 8"—5,000 each @ $.024. 40,000 each (same as above, 12 x 8") @ $.0288. 20,000 each Bags, Interior Packaging, Metal foil, Cloth Back 8 x 10" @ $.096. 5,000 each (same as above—25½ x 25½") @ $.78. 5,000 each (same as above—37 x 23") @ $1.02.

Vanant Products, Inc., Wisconsin, (Tomah)—5,000 each (same as above—32½ x 35¾") @ $1.291. Directive quantity was: 412,000 each.

Five (5) awards have been made on:

QM-30-280-49-988 covering Pads, Memo, and Ribbons, Computing Machine, to:

Boston Paper Board Co., Boston, Mass.—160,700 each (Pads, Memo, Sub 16, white, plain 6 x 9"): from $54.05 to $55.50 per M.

Ennis Tag & Salesbook Co., Ennis, Texas—102,200 each (same as above): from $.055 to $.0563. 70,000 each (same as above—6 x 9"): from $.055 to $.0563.

Elam-Elkhart Stationery Co., Allegan, Michigan—7,300 each (same as above—plain 6 x 9") @ $.06¼. 5,000 each (same as above—ruled, @ $.06¼.

Mohawk Tablet Co., Chicago, Ill.—94,000 each (same as above—6 x 9"): from $.052 to $.0519. 175,000 each (same as above—6 x 9"): from $.0519 to $.058.

Amer. Carbon Paper Mfg. Co., Ennis, Texas—700 each (Ribbons, Computing Machine 2, color, black and red Wales): from $.24 to $.25. Directive quantity on Pads, Memo was: 615,000 each; Ribbons, Computing Machine—700 each. This procurement is for the U. S. Army.

One (1) award has been made on:

QM-30-280-49-972 covering Paper Items, to:

Kimberly-Clark Corp., Neenah, Wis.—29,459 rolls (wadding-Brown-non-absorbent, 20" roll, .50 thickness, 20 ply; 99 Lin. ft per roll, no backing, no embossing) @ $2.56 each. 27,592 rolls (same as above—1.00 thickness, 40 ply, 66 lin ft per roll) @ $3.41. Directive quantity: 56,851 rolls. This procurement is for the U. S. Air Corps.

Four (4) awards have been made on:

QM-30-280-49-1003 covering Paper, Wrapping, Kraft #2 rolls, 40 lb. basis, 24 x 36—500, 30" wide, 9" dia. (various sizes), to:

Graham Paper Co., St. Louis 2, Miss.—3,000 rolls (30" w, 9" dia.): from $7.14 to $7.21 cwt. 4,550 rolls (36" w, 9" dia.): from $7.14 to $7.21 cwt.

National Container Corp. of Wisc., Tomahawk, Wisc.—5,400 rolls (30" w, 9" dia.) @ $.065 per lb. 8,050 rolls (36" w, 9" dia.) @ $.065 per lb.

Trinity Bag & Paper Co., New York City—1,400 rolls (30" w, 9" dia.) @ $6.92 cwt. 2,100 rolls @ $6.92 cwt.

Richmond Paper Co., Highland, Cal.—200 rolls (30" w, 9" dia.) @ $4.06 per roll. 300 rolls (36" w, 9" dia.) @ $4.86 per roll. Directive quantity on Paper was 10,000 rolls (24 x 36—500); and the 36" w 9" dia. Paper—15,000 rolls. This procurement is for the U. S. Army.

Four (4) awards have been made on:

QM-30-280-49-948 covering Cards, Guide and Index (various), and Folders, File, Manila, to:

Crownola Loose Leaf Products, Inc., New York City 13—731,000 Cards, Guide, Blank, plain tabs, Buff collated, ⅓ cut 5 x 8"—from $.0051 to $.006. 980,000 Cards, Index, Filing, Chem. Wood, 91 lb. basis, Salmon-plain 5 x 8"—from $.002 to $.0024.

Guide System & Supply Co., New York City—500,000 Cards, Guide, blank, plain tabs, buff, collated, ⅓ cut 3 x 5" from $.0024 to $.0027. 119,000 (same as above—5 x 8") @ $.0038. 112,000 Cards, Guide, Pressboard, Gray, Blank, self-tabs, ⅓ cut w/o lower projection 9½ x 11¾"—from $.0229 to $.0272. 50,000 Folders, File, Manila, Vertical, Flat Type, Plain Bottom, Heavy ⅓ cut, 9½ x 11¾" @ $.01194.

Warshaw Mfg. Co., 1 Main St., Bklyn, N. Y.—88,000 Cards, Guide, Pressboard, Gray, blank, self-tabs, ⅓ cut, w/o lower projection 9½ x 11¾"—from $.0234-$.02545. 20,000 cards, index, filing, chemical-wood, 91 lb. basis, Salmon plain 5 x 8" @ $.0025. 1,700,000 Folders, File, Manila, Vertical, Flat Type, Plain Bottom, heavy ⅓ cut, 9½ x 11¾": from $.0089 to $.00995.

Ennis Tag & Salesbook Co., Ennis, Texas—330,000 (same as above)—@ $.01. Directive quantity on Cards (various)—1,550,000 each Folders, File—3,500,000 each. This procurement is for the U. S. Army.

Twelve (12) awards have been made on:

QM-30-280-49-901 covering Various Paper Items, to:

American aCrlon Paper Mfg. Co., Ennis, Texas—177 boxes Paper, Carbon, Pencil, Black 8 x 10½" @ $.37.

Colonial Process Supply Co., New York 11, N. Y.—1,584 sheets Paper, Decal, Duplex 25 x 26" @ $10.00 per C.

H. T. Herbert Co., New York City—14 pads Paper, Tracing, 8½ x 10½" @ $.50 per pad.

McLauren Jones Co., Brookfield, Mass.—4,032 sheets Paper, Decal, Lacquer coated, 20 x 25" Transparent @ $107.83 per M. 12,960 (same—25 x 36") uncl'd @ $69.35 sheet.

R. P. Andrews Paper Co., Wash., D. C.—1,900 sheets Press Board, red 24 x 36"; .017 thick @ $.16 per sheet.

J. H. Weil & Co., Phila., Pa.—1,248 qrs. Paper, cross section, printed, drawing, canary, blue lined, 4-4 to inch, 17 x 22" size @ $.70 per qr. 1,584 (same as above—tracing, white, orange lined 20 x 20 to inch) @ $.02 per sheet. 124 rls. Paper, drawing, cream, med. wt. unmounted, 42" wide @ $7.00 per roll.

Ulano Products Co., Bklyn, N. Y.—217 sheets, Profilm, 36 x 40", silk screen process—at $1.25 per sheet.

Interchemical Corp., Ault & Wiberg Carbon & Ribbon Co., Cincinnati, Ohio—300 pkgs. Carbon Paper, light weight, t/w black, 14 x 17—@ $.836 per pkg.

Walker Goulard Plehn Co., Inc., New York City—6,900 sheets Paper, Index, Chem. Wood, basis 25½ x 30½ Canary @ $.024. 140,800 sheets same as above—Green @ $.024. 7,500 sheets Paper, Printing, Bristol, Black basis 22½ x 28½ @ $.044. 5,605 sheets Board, RR, uncoated 4 ply, blue, 22 x 28"—@ $.0425.

Kennelly Paper Co., Inc., New York City—1,200 sheets Paper, Index, Chemical Wood, white, basis—25½ x 30½—@ $.0434.

Henry Lindemeyer & Sons, New York City—1,090 each Boards, RR, coated, 2 sides, 6 ply, blue 22 x 28"—@ $.78.88 per M. 570 sheets same as above, Orange, Yellow, 22 x 28"—@ $78.88 per M. 3,050 sheets Board, White Single, coated, 2 sides, 6 ply, size 22 x 28 @ $59.38 per M. 1,000 sheets Paper-Ledger, Sulphite, Buff, 22 x 34" 128 lbs. @ $27.71 per M.

National Card, Mat & Board Co., Chicago, Ill.—4,525 sheets Board, Illustration, Smooth surface, single thick. 30 x 40" @ $.3777 each. This procurement is for the U. S. Army (Air Corps).

Navy Invitation to Bid

Inv. No. 4505—Paper, carbon, hectograph—4,100 boxes. Bids will be opened 21 April 1949 at the New York office. Delivery: May and October 1949 to various destinations.

Inv. No. 4507—Paper, machine, computing—59,000 rolls. Bids will be opened 21 April 1949 at the New York office. Delivery: May and October 1949 to various destinations.

Inv. No. 4462—Paper, kraft, wrapping—approx. 29,805 rolls. Bids will be opened 7 April 1949 at the New York office. Delivery: May to July 1949 to various destinations.

Inv. No. 4463—Paper, carbon, hectograph—13,700 boxes. Bids will be opened 22 April 1949 at the New York office. Delivery: July, 1949 to various destinations.

Inv. No. 4464—Part #1—Cards, guide—1300 sets: Cards, index—1,800 M.; Clips—large tideal—type II—1,200 boxes. Bids will be opened 25 April 1949 at the New York office. Delivery: May 1949 to various destinations.

Inv. No. 4525—Barrier material, various—1635 rolls. Bids will be opened 13 April 1949 at the New York office. Delivery: May, June, August 1949.

Inv. No. 4516—Cups, drinking, paper—3¼ ozs.—1,400,000 each. Bids will be opened 20 April 1949 at the New York office. Delivery: May 1949 to various destinations.

Inv. No. 4459—Paper, Typewriter and writing—varied—72,500 reams. Bids will be opened 27 April 1949 at the New York office. Delivery: May, October 1949 to various destinations.

Inv. No. 4465—Paper, duplicating—56,900 reams. Bids will be opened 27 April 1949 at the New York office. Delivery: July 1949 to various destinations.

Navy Awards Made

Inv. No. 4191—Tape, adhesive, pressure, sensitive—16,400 rolls, to:

Minnesota Mining & Mfg. Co., St. Paul, Minn.: from $.60 to $.98 per roll.

Inv. No. 4192—Pads, Type I—12,100 Rolls, 20" printing—2,700 to:

Bee Paper Co., Inc., Bklyn, N. Y.—5,100 pads: from $.175 to $.215. 2,700 rolls: from $.201 to $2.14.

(Continued on page 60)

Where are your new markets for softer paper products made like this ?

You can make them better and at lower cost with Du Pont Sulfamic Acid*

EVERY DAY, new markets for softened paper and paper products are coming to light. A few of them are shown here. Probably you can think of many more. And today, you can make the paper that will *sell* these markets—easily and economically—with Du Pont Sulfamic Acid.

Just add Sulfamic Acid to the desired amine to get an Amine Sulfamate that softens your paper and also adds a high degree of *fire resistance*—with a single treatment.

BETTER SOFTENING is assured at *all* humidities because Amine Sulfamates do not depend entirely on water pick-up. Paper treated with an Amine Sulfamate retains its softness even after long periods of normal use. And it can be readily printed or glued.

EXTREME YELLOWING RESISTANCE can be easily obtained with a simple modification of the Amine Sulfamate.

LOW-COST... EASILY APPLIED! Du Pont Sulfamic Acid is inexpensive. Added to amines, it can be economically and uniformly applied by immersion or spray.

Where fire resistance without softening is required, the regular Du Pont Fire Retardants are recommended.

TO HELP YOU take advantage of this new development, Du Pont technical assistance is readily available. Just clip the coupon for our samples and technical bulletin on Sulfamic Acid.

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SULFAMIC ACID

*The basic material in making Amine Sulfamates

BETTER THINGS FOR BETTER LIVING: . . . THROUGH CHEMISTRY

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Please send me Technical Bulletin on Sulfamic Acid.

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Address_____

City_____ State_____

Suppliers

Timber Engineering Co., affiliated with the National Lumber Mfr's. Ass'n. for the past 16 years, has made its laboratory facilities available to pulp and paper manufacturers. The company has developed patents on methods of utilizing wood-sugar lignin and has pending patents on producing pulp from hardwood sawmill waste. It is going forward on the development of a high alpha cellulose content pulp, to be produced from hardwood waste or other forms of wood waste. Prior lignin investigations qualify its chemists for work on stream pollution abatement. Arrangements for conferences can be obtained through C. A. Rishell, director of research, Timber Engineering Co., 1319 Eighteenth street, N.W., Washington 6, D. C.

Cochrane Corp., Philadelphia, has acquired substantially all of the capital stock of Liquid Conditioning Corp., Linden, N. J. Hereafter, Liquid Conditioning Corp. will operate as a wholly-owned Cochrane subsidiary, the products of the former continuing to be marketed under the trade name, "Liquon." The engineering, sales and technical staffs of the two corporations will augment each other. S. B. Applebaum, of Liquid Conditioning Corp., will be in charge of the cold water conditioning activities of both organizations, as well as the conditioning of liquids other than water. "Liquon" district sales offices are combining operations with existing Cochrane sales offices.

W. A. Jones Foundry & Machine Co., of Chicago, has named Joseph A. Marland sales manager and Thomas A. Jones assistant sales manager. Joseph A. Guyer, who has been handling general work in the sales and advertising departments, is now advertising manager. Mr. Marland has been with the organization since 1926. Mr. Jones, who entered the organization in 1940, has been secretary and personnel manager. He will continue as secretary in addition to taking on the work of assistant sales manager. Mr. Guyer entered the Jones organization in 1929.

Hudson-Sharp Machine Co., Green Bay, Wis., has opened a New York office at 55 West 42nd street, telephone LOngacre 4-2877, to serve the New England and eastern seaboard states. C. A. Wetli, vice-president and eastern sales manager, is in charge.

Clinton Sales Co., Inc., has absorbed the Benham Co., New York bulk corn products broker, Carl Whiteman, vice-president in charge of sales and advertising of Clinton Industries, Inc., reports. George F. Benham has retired from the Benham firm to devote his time to personal affairs. Benham activities as bulk broker for Clinton Industries, manufacturer of products from corn at Clinton, Iowa, will be handled by Clinton Sales Co. at 120 Wall street, New York City, under direction of M. Riley Owens, New York sales manager. Personnel of the Benham Co. will be retained, Mr. Owens said.

Bingham Brothers Co. will act as exclusive eastern sales distributor for synthetic rubber inking rollers made by United States Rubber Co. Bingham Brothers Co. services 17 states along the eastern seaboard. It operates composition roller plants in Philadelphia, New York, Baltimore and Rochester and maintains sales offices and representatives in principal eastern cities. U. S. Rubber is enlarging and streamlining synthetic rubber roller production at its Providence, R. I., plant.

National Aluminate Corp., Chicago, is offering Nalco SR-155, a new fuel-oil treatment for oil-fired locomotives and boiler furnaces. The product is designed to prevent sludge formation in storage tanks, eliminate fouling of fuel-oil preheaters, stop gumming at burner tips, and remove soot in the combustion chamber and flues. Nalco SR-155 is added to the fuel oil in the storage tank and requires no special feeding equipment.

L. R. Beck, export manager, and Frank Gilbert, service representative of the Harris-Seybold Co., Cleveland, are touring graphic arts centers in Asia and Europe. Their trip is taking them to Manila, Hong Kong, Batavia, Delhi, Calcutta, Madras, Bombay and Karachi. When they reach Europe, they will visit London, Brussels, Amsterdam, Copenhagen, Oslo, Stockholm, Zurich, Paris, Milan, and Rome.

Alhydro, Inc., Baltimore, Md., manufacturer of the Alhydro Floc Producer, has appointed as distributors for the Alhydro unit, the H. D. Fowler Co., Inc., Seattle, and General Filter Co., Ames, Iowa. The Alhydro Floc Producer is an electronic unit for producing aluminum hydroxide floc for industrial and municipal water-treament plants.

Vice Admiral Earle W. Mills, USN (Ret.), has been elected executive vice-president and a director of the Foster Wheeler Corp., and David McCulloch, formerly executive vice-president, has been named vice-chairman of the board.

Napco Chemical Co., Harrison, N.J., has elected Thomas A. Printon president, succeeding Charles P. Gulick, who will continue as board chairman.

Whittaker's Steward, Speak

CINCINNATI — Hareld S. Steward, treasurer of the Whittaker Paper Co., discussed "Trends and Developments in the Paper Industry" at the Credit Club luncheon in Hotel Sinton on March 22.

Ireland

Having hinted to members of the Mechanical and Electrical Engineering Society at University College, Dublin, that it might be possible eventually to follow the development of Eire's afforestation scheme with the establishment of a wood pulp mill, Mr. Cosgrave, parliamentary secretary to the prime minister of Eire, added that at the end of the war the Irish paper mills resumed their normal lines of production, and steps were taken to implement their post-war plans for expansion. The present output of the mills, he said, was over 19,000 tons a year, and it was hoped with greater expansion to cater ultimately for the entire needs of the country.

The number of persons employed in the paper mill industry was little short of 1,000 and, with increased supplies of raw materials, it should be possible to increase the numbers.

The whole question of protection to be afforded to the paper industry had been under consideration by the paper mills in consultation with their largest customers, the printing industry, and the whole matter was to be reviewed during March.

C. A. Cusack, general manager of the Clondalkin Paper Mills, delivered an address on "The Progress of the Paper and Pulp Industry. He said that in Ireland the annual consumption of paper products amounted to approximately 65,000 tons. The possibility of founding a pulping arm to the industry at the moment appeared remote, as the wood available was scattered over a wide area and was of diverse species.

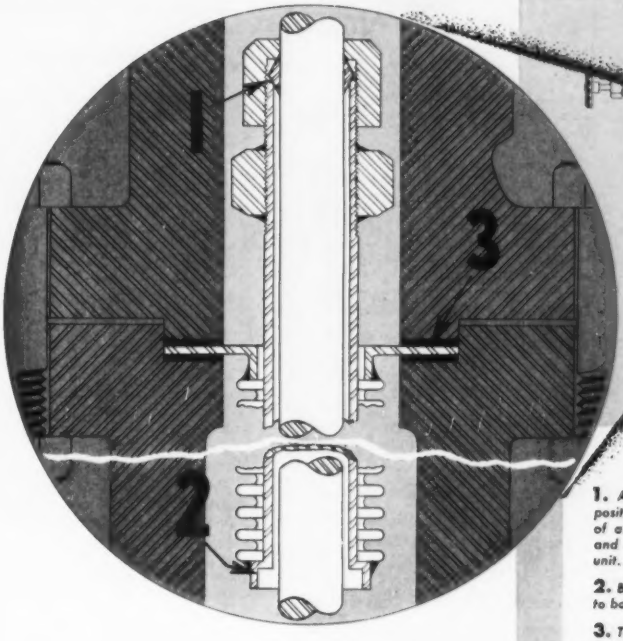
167 Paper School Diplomas

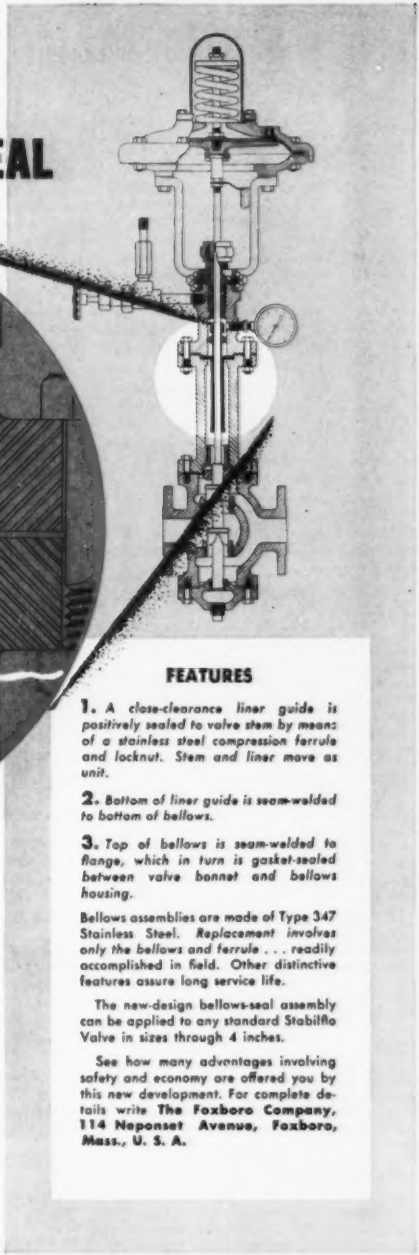
CAMAS, Wash. — On March 10, 167 employes of the Crown Zellerbach Corp. who for 20 weeks attended the Crown Willamette paper school received diplomas in the sixteenth annual graduation exercises of the school. This is the largest group graduation since the 1941-42 school year and was made up of students from Crown Zellerbach Corp., Camas, West Linn and Portland; Pacific Coast Supply Co., Portland; Western Waxed Paper Co., Portland; and Zellerbach Paper Co., Portland.

In the 16 years the school has been operating 2,160 diplomas have been presented to students of all classes.

Lectures from the colleges, outside supply firms and the company's forestry department this year presented modern trends in cellulose usage, chemicals for higher color bleached pulp, logging methods, progress in growing new wood, use of the electron microscope in wood studies, developments in steam generation, discoveries in metallurgy, conveying methods and many more.

NOW! Stabilflo Valves with NEW, POSITIVE BELLOWS-SEAL





● Here's an automatic process control valve with a positive, safe, yet *simply-constructed* seal . . . for use wherever toxic, corrosive or precious fluids are involved. The Foxboro Stabilflo Valve is now available with a new-design, bellows-sealed valve stem. Instead of the conventional stuffing box, the packless bellows assembly makes a positive seal between the valve stem and valve body. The bellows expands and contracts with reciprocating action of valve stem.

Over the past eight years, Foxboro has pioneered in the development and application of bellows-sealed control valves for *special* jobs. This improved design is the outcome! It removes bellows-sealed valves from the class of "specials" because of its unique simplicity.

FEATURES

1. *A close-clearance liner guide is positively sealed to valve stem by means of a stainless steel compression ferrule and locknut. Stem and liner move as unit.*

2. *Bottom of liner guide is seam-welded to bottom of bellows.*

3. *Top of bellows is seam-welded to flange, which in turn is gasket-sealed between valve bonnet and bellows housing.*

Bellows assemblies are made of Type 347 Stainless Steel. *Replacement involves only the bellows and ferrule . . .* readily accomplished in field. Other distinctive features assure long service life.

The new-design bellows-seal assembly can be applied to any standard Stabilflo Valve in sizes through 4 inches.

See how many advantages involving safety and economy are offered you by this new development. For complete details write **The Foxboro Company, 114 Neponset Avenue, Foxboro, Mass., U. S. A.**

FOXBORO REG. U. S. PAT. OFF. **INSTRUMENTATION**

Ten Ways to Protect Small Woodlands from Fire

WASHINGTON — Despite marked progress in reducing the number and damage of forest fires in recent years these timber scourges still ravage about 30,000,000 acres of timberland annually. The Forest Service in the U. S. Department of Agriculture recommens 10 fire prevention measures for small woodland owners. Seventy-five percent of the country's commercial timber land is in small blocks averaging about 62 acres and owned by some 4,200,000 individuals.

While one can't fireproof a forest as he can a building, there are a number of simple measures which if taken now by small woodland owners will go far to make fire in their forests less likely or easier to put out during the forest fire season just ahead, the Forest Service declares. In the aggregate many millions of dollars in timber, soil, wildlife, water and recreational values may thus be saved.

The recommended protection measures follow:

(1) Plow lanes from 4 to 6 feet wide cutting the forest into 20 or 30-acre blocks if it is large enough. Otherwise, run these fire lanes between your forest and any similar tracts adjoining or contiguous to it. If the required firebreaks or lanes were put in previously, see now that they are clear and bare of inflammable fuels or debris, such as fallen tree limbs, leaves, needles, dry weeds, grass or brush.

(2) Cut, graze, or plow under the weeds and grass on open strips around the edge of the forest or between the forest and nearby roads and railroads before this vegetation dries out this spring and becomes a hazard that may be ignited by a match or cigarette tossed from a passing automobile or by a spark from a locomotive or box car break shoe.

(3) Build firebreaks—lanes hoed down to mineral soil—around any sawmills, cottages, groups of farm buildings or other structures in the woods to prevent spread of fire from these areas into the forest or vice versa. If you have a picnic spot developed in the forest for you and your neighbors, build firebreaks around it, too, to prevent a neglected, after-picnic fire from spreading to your trees.

(4) If slash—tree tops, limbs, etc., left by loggers—is scattered in the forest, see that it is cut or broken into small pieces which will lie close to the ground away from the standing trees.

(5) Clean up any accumulations of debris and trash in the forest or yards about buildings that may as the weather warms become "hot spots" from which fires may start.

(6) See to it that there is a sufficient supply of fire fighting tools, hoes or rakes to clean firebreaks, axes to chop down burning snags, shovels to throw dirt on fires, and water buckets for wetting down smouldering embers, either at a convenient central location or in strategic caches. "Fire swatters," which can be made by attaching 10 by 18 inch rectangles of belting to hoe or rake handles, are also of special value in fighting grass or piney wood fires.

(7) See that wells are in good repair. Provide dipping places in shallow streams or arrange for a supply of water in barrels or other containers in or near the forest so that fire fighters will have a convenient supply with which to excellent help in combating small fires in or near fight a fire. Barrels or other containers of sand that can be thrown on fires while small are an buildings.

(8) Prepare and have readily accessible telephone numbers of local fire wardens or other public fire control officials whom you may have to call in case a fire is larger than you can handle.

(9) Approach your neighbors in the interest of mutual fire prevention, and seek to set up agreements to rally to one another's aid if the fire scourge strikes.

(10) Obtain fire prevention posters from your nearest state, federal, or local forest officer or by writing to Director, Cooperative Forest Fire Prevention Campaign, Forest Service, Washington, D. C., and put them up throughout your neighborhood and in your forest to warn hunters, visitors, workers, etc., against thoughtless or careless use of fire on your property.

New "Kentucky" Home

LOUISVILLE, Ky.—The Kentucky Paper Box Co., whose building at 117 North Sixth street was destroyed by fire last September, has purchased a three-story brick and concrete building at 823 South 15th street for $83,000. Fred R. ZurSchmiede is president of the firm.

German Paper Machinery

WASHINGTON—The Bizonal area of Germany is producing paper machinery under a large contract reported by the Bizonal area government.

Record Chlorine Output

WASHINGTON — Chlorine production set a record of 1,600,000 tons in 1948, exceeding even the war-time peak of 1,300,000, the Chemicals Division of the Commerce Department reported this week.

With the extensive expansion now underway, it is expected that installed production capacity for chlorine may reach 2,000,000 tons annually by 1950.

DILLARD ADVANCES

Stark S. Dillard (left) has been elected chairman of the board of the Dillard Paper Co., Greensboro, N. C., and R. E. Morrissett, (right) president, succeeding Mr. Dillard. . . . Mr. Morrissett previously was executive vice-president. . . . During the past year the company opened a sales office in New York and a branch in Wilmington, N. C. . . . At the same time Karl Smith, manager of the Dillard branch in Charlotte, N. C., was named sales promotion manager. He was formerly sales promotion manager of the Union Bag & Paper Co., New York.

Appropriation Killed

SPRINGFIELD, Mass.—Paper manufacturers in the Connecticut River Valley have been informed that a House appropriations sub-committee in Washington had eliminated Adams and North Adams from a flood control appropriation bill which was reported to the full Appropriations Committee. Notified of the rejection of the flood control appropriation for Western Massachusetts, Governor Paul A. Dever requested an immediate inquiry.

No funds to begin work this year on the proposed Barre Falls Reservoir in the Ware River were included in the new appropriations bill.

The Barre Falls project had been described as "the missing link" of the overall Connecticut River Flood Control Development. Attempts to obtain money from Congress to start it have failed for several years.

The committee did approve funds to continue work on four Massachusetts flood control projects.

The projects and the amount Army engineers requested for them in the new fiscal year, which will extend from July 1, 1949 to June 30, 1950, follows:

Holyoke, $264,400; Birch Hill reservoir, $46,000; Riverdale, $517,000, and Tully Reservoir, $141,000.

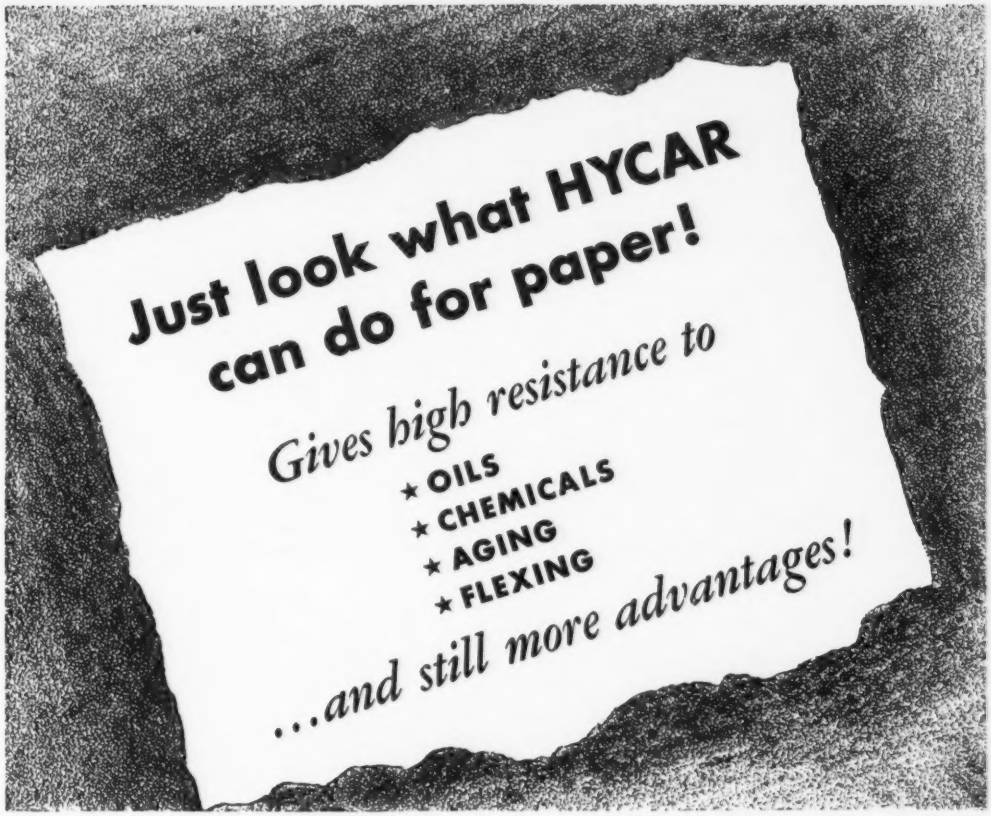
The committee slashed a blanket 15 percent from the Army Engineers' request for all projects, but left the door open for the 15 percent to be recovered from Congress later in a deficiency appropriation. The committee said it anticipated a drop in construction costs which would permit Army engineers to do the work they planned for 15 percent less. But, the committee added, if the drop in costs does not materialize, engineers can request additional money later in a deficiency appropriations bill.

Ten Million Seedlings

VANCOUVER, B.C.—During 1949, the B. C. Forest Service, providing favourable weather conditions permit, plans to plant 10,000,000 Douglas fir seedlings on Vancouver Island. Lifting of seedlings from nurseries has already commenced.

Schwartzberg to Gimbel's

NEW YORK—Jerome Schwartzberg has been appointed stationery buyer at Gimbel's. Previously he held the same post at Hearn's.



★ Hycar American Rubber Latex, used as a coating or impregnant, gives paper new properties that make possible a wide range of profitable applications.

It makes paper highly resistant to many damaging factors. It increases tear and wet strength—makes soft but strong smooth-draping sheets.

Hycar latex may be added to paper before or after sheet formation. It can be used to modify other resins used in coating or impregnation. It can make phenolics tough instead of brittle. It can plasticize vinyls *permanently*—eliminate plasticizer migration.

Moreover, Hycar-based adhesives permanently bond paper—as well as wood, leather, aluminum foil, vinyl films and other materials.

Best of all—Hycar latex can be used safely, simply, easily. No vulcanization is required. Normal drying times are used. No explosive solvents need be handled, nor are costly solvent recovery systems needed.

We will be glad to work with you on applications or problems relating to the use of Hycar latex. For more information, please write Dept. HH-4, B. F. Goodrich Chemical Company, Rose Bldg., Cleveland 15, Ohio.

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American Rubber

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GEON polyvinyl materials • HYCAR American rubber • GOOD-RITE chemicals and plasticizers

Production Execs. Meet

NEW YORK—A national conference of 825 production executives to consider methods to make production systems more quickly sensitive to changes in demand for output and to maintain an adequate work force at a time when work loads fluctuate, is set for April 12-13, at the Waldorf-Astoria Hotel by the Production Division of the American Management Ass'n.

Speakers and discussion leaders include George S. Dively, president, Harris-Seybold Co., Cleveland, and AMA production vice-president; J. K. Louden, vice-president, York Corporation, York, Pa.; Joseph Moody, president, Southern Coal Producers Ass'n., Washington, D.C.; Joseph D. Keenan, director, Labor's League for Political Education, Washington, D.C.; Ewan Clague, commissioner of labor statistics, Department of Labor, Washington, D.C.; and others.

J. Ward Kenner, vice-president, B. F. Goodrich Co., Akron, will lead the discussion on the emerging pattern of wage demands.

Practical applications of break-even budget principles will be examined in another session by T. R. Elsman, assistant controller, Monroe Calculating Machine Co., Orange, N. J.; Dr. William McFarland, director of research, National Ass'n. of Cost Accountants, New York; and Dr. R. Parker Eastwood, School of Business, Columbia University.

Union cooperation in the establishment of job evaluation and incentives will be discussed by Hoyt P. Steele, vice-president, Benjamin Electric Mfg. Co., Des Plaines, Ill., at a session at which J. Manuele, director of quality control, Westinghouse Electric Corp., Pittsburgh, will present a paper on quality control, and Cloyd S. Steinmetz, director of training, Owens-Corning Fiberglass Corp., Newark, Ohio, will give a case history on the measurement of the "management-mindedness" of foremen.

At other sessions Alfred J. Marrow will talk on social statesmanship for management, Dr. A. D. H. Kaplan, Brookings Institute, Washington, D.C., will analyze the economic scene, and Frederick L. Schuster, former director, Lehman Corp., New York, will explore depreciation and replacement of plant equipment as a policy problem for management.

Slowing Ketchikan Pace

KETCHIKAN, Alaska—After voting unanimously for motions opposing the Lemke homesteading act and repeal of Alaska's experience rating law, Chamber of Commerce members on March 10 heard W. A. Bates say that the Alaska tax situation and the decline in commodities have slowed pulp mill developments in this region.

Mr. Bates, who recently returned here after several weeks in the states, said President Fred G. Stevenot of the Ketchikan Pulp & Paper Co., reported it can be said the company has spent heavily for site, surveys and plant design; has signed a timber contract and arranged for a $16,000,000 RFC loan, but is waiting for other aspects to be settled. Mr. Bates favors waiving all taxes on the industry in Alaska until it is well under way. He expressed fear that the new business license bill will not be liked by company attorneys, but said it is felt that prices and commodities will turn stronger soon. Some delay is due to experiments at Longview with the new magnesium pulping process which is desired for the local mill, it was stated.

Winter delayed drilling at Lake Connell, which is now proceeding. The mill here will be a 525-ton alpha grade type instead of the 300-ton daily sulphite type originally planned, Mr. Bates said. The Lemke action approved the report of a special committee.

On the Job for 55 Years

SAN FRANCISCO—Louis Bloch, board chairman of the Crown Zellerbach Corp., was presented with the only emblem ever awarded by the company for 55 years of continuous, active service at the firm's service pin banquet at the Commercial Club on March 22. D. J. Galen, secretary, received a 44 year pin and 34 other employes were given pins for lesser years of service.

Mr. Bloch, who spent his anniversary working at his desk at 343 Sansome street during the day, recalled his advent into the paper industry:

"The Crown Paper Co. acquired a bag factory in San Francisco from one of its customers who had failed, and at seven o'clock on March 22, 1894, I walked into that factory, put on a pair of overalls and began my career in paper by tying up paper bags."

Mr. Bloch was one of the key figures in the merger of Pacific Coast paper companies, known in 1912 as the Crown Williamette Paper Co., which later, in 1928, merged with the Zellerbach Corp. to become the Crown Zellerbach Corp.

Mr. Galen began work here on November 1, 1908, at the Crown Columbia Paper Co., which later was taken over by the present corporation.

Forest Survey Resuming

WASHINGTON—Resumption of work under the National Survey of Forest Resources Act, with expanded appropriations, has been approved by the Senate.

The Senate adopted an amendment to the Act providing for a total appropriation of $11,000,000, and making available $1,000,000 annually, instead of $750,000 as originally authorized.

The Act dates from 1928, when $3,000,000 was appropriated. This was later increased to $6,500,000. During the war, said sponsors of the amendment, work was so delayed, that it is now necessary to speed up the survey, and also to meet increased operating costs.

B. C. Cellulose to Mexico

VANCOUVER, B.C.—Cellulose from British Columbia will be exported to Mexico when the Columbia Cellulose Co., Ltd., starts operations at its plant now under construction at Prince Rupert, B.C. A new viscose rayon plant was recently opened at Zacapu, Mexico by the president of the Mexican republic. The plant is owned by Mexican interests and the Celanese Corporation of America, parent company of the British Columbia firm.

According to officials of the company, when the Prince Rupert plant is completed, it will produce dissolving pulp wood which will be used in both the Mexican and United States operations of the parent company. The Mexican plants will provide a large amount of rayon to fabric manufacturers.

At Prince Rupert, C. H. Klotz, project engineer, stated the improved steel storage shed and carpenter shop for the new pulp mill had been completed. Administrative buildings, pulp storage and shop buildings will be built next. Work is also scheduled to start in the immediate future on the construction of the new power plant.

Champion's Simpson Speaks

MIDDLETOWN, Ohio—"Machine Coating" was the subject of a talk by J. R. Simpson of the Champion Paper & Fibre Co., Hamilton, Ohio, on the Black-Clawson, Shartle, Dilts lecture course program at the Shartle classroom of the Shartle Brothers Machine Co. on March 22.

Mr. Simpson discussed, primarily the Champion coater and the Champion process and offered recommendations as to preferred types of adhesive cookers, clay mixers, and other essential coating equipment. Further discussion centered on the preferred location of the coaters in both horizontal and stack dryer sections, the application of smoothing presses and the moisture content of the sheet for best results in machine coating of book papers, board grades, breadwrap, rotogravure, etc. The meeting was followed by a question-and-answer session.

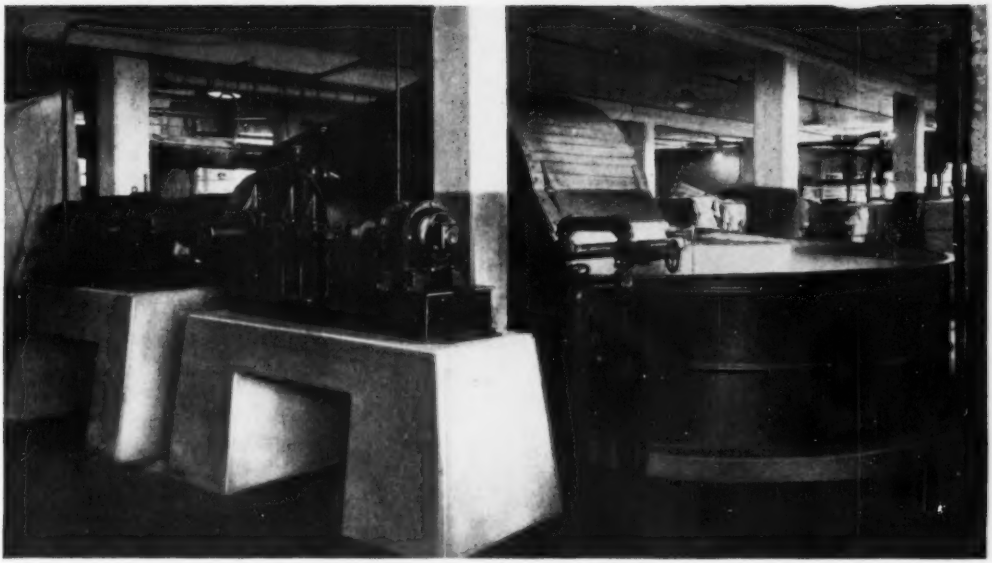
This was the seventh meeting in a scheduled 1949 series of 11 talks on paper making sponsored by the B-C-S-D organization.

Three-Score and Thirty!

NEW HAVEN, Conn. — Minotte E. Chatfield, president and treasurer of the paper merchant firm bearing his name, on March 13 celebrated his 90th birthday and the 68th year of his active connection with the paper trade in this city.

Leases Space in Newark

NEWARK, N. J.—Laminators, Inc., of Worcester, Mass., has leased 12,500 square feet of space in the former Clark Thread Mills building at 243 Passaic street.



Midwest Pulper

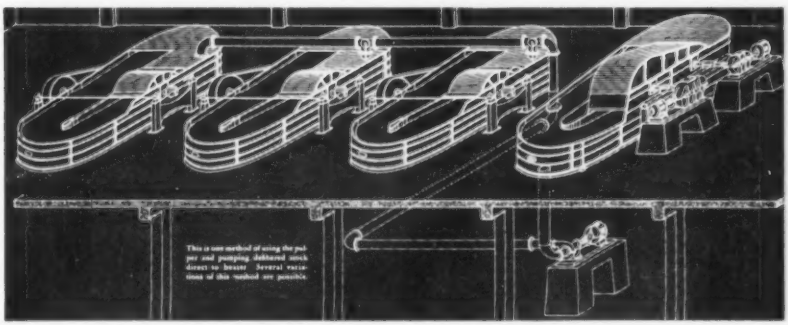
The Midwest pulper is extra-rugged—capable of work that would break down the best beater ever built. It is being used ahead of and discharging direct to beaters or chest, in some cases replacing beaters entirely.

One mill with four Midwest pulpers is reducing to thoroughly defiberized form over 200 tons of virgin pulp every 24 hours. No shiners or fish eyes—a thorough slushing job. Other mills operating one or two units for years are obtaining like results.

When revamping your preparatory system, consider the Midwest heavy-duty pulper:

a. To slush dry pulp thoroughly, fast, and economically.
b. To defiber unbleached sulphite or kraft preparatory to bleaching.
c. To re-slush broke.
d. For color or chemical blending.
e. To hold down power costs.
f. To reclaim floor space.

To use "refining" beaters as pulpers is a reckless and costly operation—high repair factor. To use this rough-and-ready pulper for such work is economical operation—virtually no maintenance at all.



HAVE US TELL YOU MORE— Cite case histories and submit technical data on the range of sizes and capacities.

The Midwest-Fulton Machine Co. DAYTON 2, OHIO

Parnum to Masonite

UKIAH, Calif.—Ewart M. Parnum has been named as forest engineer of the Masonite Corp.'s hardboard plant under construction here. He will have charge of the operation of the truck logging road which Masonite is building between the new plant and the company's timber lands lying west of Ukiah. In addition he will direct Masonite's logging operations on its own lands and supervise the building of additional logging roads as future developments may require.

To join Masonite, Mr. Parnum resigned as resident engineer on the Queen Charlotte Islands for the Powell River Co. of Vancouver, B. C. Previously he was engaged in logging and logging engineering with Bloedel, Stewart and Welch, Canadian Forest Products, Ltd., and A. C. Buckland, forest engineering consultant.

Two Flying to Sweden

VANCOUVER, B.C.—R. J. Filberg, vice-president, Canadian Western Lumber Co., and F. D. Mulholland, chief forester, have left Vancouver, B.C., by air for Sweden to study logging and small wood storage in connection with the company's proposed new pulp mill at Duncan Bay, Vancouver Island, B.C. They expect to return late in April. Mr. Filberg's son Robert Jr., has been in Sweden for a year studying forestry and father and son will get together at Stockholm. Pulp producing and marketing studies are being carried out for the purpose of advising on best methods to be adopted at Duncan Bay.

Standard Aids Neighbor

RICHMOND, Va.—The Standard Paper Co. pitched in to help a neighbor when fire destroyed the near-by Dixie Portland Flour Co. on March 23. According to Fire Chief Finnegan, the Standard company has some of the best fire-fighting equipment in the city. Firemen used a pumper belonging to Standard to pour 2,000 gallons of water per minute on the flames, drawing the water from the old canal. Temporary offices of the flour mill have been set up at Standard Paper Co.

Two Firms Indicted

CHICAGO—Two paper-stock firms adn three of their officers were indicted on March 11 on charges of evading $2,713,822 in income taxes. Indicted were the Thomas Paper Stock Co. and the Rockton Felt & Paper Co.; Alfred E. Sandroff, president of both firms; Bert Deriger, chief bookkeeper of the Thomas company, and Charles Crane, secretary of the Rockton company.

Minch New Howard V. P.

John E. Minch has been elected a vice-president of Howard Paper Mills, Inc. Mr. Minch has been general manager of the Aetna Paper Co. division of the Howard group since 1943.

Portable Hydrapulper

OLDTOWN, Maine—The Old Town Co., manufacturer of molded pulp products, was confronted with the problem of reclaiming broke consisting of broken and defective food containers manufactured from wood pulp. Due to limitations in beating capacity, the

company was unable to process both its virgin stock and broke and yet maintain production schedules. Further, the stock resulting from processing the broke contained undefibered particles which adversely affected the resulting products. Although the amount of broke was small, limiting the feasible cost of additional equipment for its treatment, the loss incurred from burning this broke prompted the company to search for some method of reclamation.

To determine the value of a Hydrapulper for this service, a three-foot portable unit, used primarily for pilot plant and laboratory work, was installed on a trial basis. To minimize the trucking of the broke, the Hydrapulper was installed for batch operation on the first floor near the forming machines. The dump line from the Hydrapulper was installed to the machine chest where the repulped broke after extraction through the 5/8" holes in the extractor plate was mixed with the virgin stock. The Hydrapulper was run on batches of about 35 pounds dry weight for about an hour each, with complete defibering of the furnish resulting. It proved so satisfactory on the trial installation, handling a whole day's broke or about 300 pounds in an eight-hour shift, that the Old Town Co. decided to purchase it and leave it in its trial location as a commercial unit.

This type of operation has brought to the front the use of the three-foot portable Hydrapulper in commercial installations on small tonnage applications.

Rising Repairs Under Way

HOUSATONIC, Mass.—Two contracting firms late in March engaged in flood control work on the property of the Rising Paper Co., where heaving damage was suffered in the year-end flood.

The Petricca Construction Co., of Pittsfield is dredging to straighten the Housatonic River bed behind the paper plant, and the Ley Construction Co., of Springfield is working on the former raceway.

The paper company is to install later a coal conveyor which will replace the coal trestle which collapsed under the strain of the flood waters on New Year's morning. While the project is under way, water to generate power is running from north of the Rising dam into the mill in a huge pipe line.

CWT License Area

Details of the area included in the forest management license granted the Canadian Western Timber Co., Ltd., have been disclosed by Lands and Forests Minister E. T. Kenney, for British Columbia.

"The area includes 133,153 acres of company lands on Vancouver Island, and the boundaries of the crown lands on island and mainland enclose 237,475 acres; of this crown area, however, only the stands now immaturn (approximately 114,000 acres) and related waste lands (approximately 39,000 acres) are at the disposal of the company", said Mr. Kenney.

Riverside Reopening

HOLYOKE, Mass.—The Riverside Division of the American Writing Paper Corp., which halted operations recently, may reopen after only a temporary closing, it was learned on March 24. Papers formerly made on the Riverside machines are now being turned out in the company's Nonotuck division. However, the management is searching for new lines which may be developed at the Riverside.

Singer Heads Rex Sales

BROOKLYN, N. Y.—Irving A. Singer is now associated with Herman Shulman and David Adlman of Tidy-House Paper Products, Inc., in a new venture known as the Rex Paper Products Co. He will be in charge of sales. Mr. Singer was formerly president of the Hi-Land Paper Products Co., Ossining, N. Y.

Wilber Addresses Lions

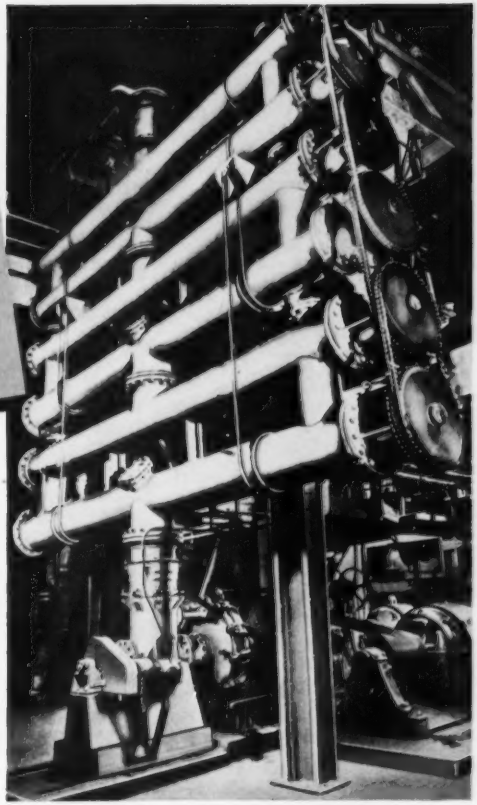
SAVANNAH, Ga. — Roland Wilber, manager of manufacturing at the Southern Paperboard Corp. mill, addressed the Lions Club on March 10, describing the processes in Southern's mill from raw material to finished product.

To 5537 North Clark Street

CHICAGO — Bowes Industries, producer of Bondware plastic surface paper plates, is now in larger quarters at 5537 North Clark street.

Ever Since 1940

Stainless-Clad Steel has protected Chemipulpers and their products



Reaction chambers of Chemipulpers, manufactured by Paper & Industrial Appliances, Inc., New York, N. Y., have been made of Stainless-Clad Steels since 1940.

Type 304 stainless steel, permanently bonded to conventional steel backing plate, protects this Chemipulper against the attack of chemicals in which the wood chips are cooked. In addition, materials processed are safeguarded against contamination. Thus, both long life and high-quality production are assured.

Lukens makes the most complete line of clad steels available anywhere—Nickel-Clad, Stainless-Clad, Inconel-Clad and Monel-Clad—enabling you to obtain protection against a multitude of corrosive materials. Claddings of these corrosion-resistant metals that are 10% or 20% of total plate thickness meet most requirements. The extra smooth sodium hydride finish on Lukens Clad Steels makes cleaning extra easy and minimizes sliming.

Ask your fabricator to quote on processing equipment made of Lukens Clad Steels. You'll get this built-in protection at surprisingly low first cost and your upkeep charges will also be low. For Bulletins 255 and 338 describing clad steels, write Lukens Steel Company, 403 Lukens Building, Coatesville, Pa.

CLAD METAL STEEL

LUKENS

Nickel-Clad Stainless-Clad
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STEELS

SOLID METAL ADVANTAGES WITH CLAD STEEL ECONOMY

• • SPEED SCRAP TO THE MILLS TO MAKE MORE STEEL • •

Good Packing Contest

SOUTH GLENS FALLS, N.Y.—Employes of the shipping department of the local plant of the Marinette Paper Co., were honored at a dinner in the Queensbury Hotel, Glens Falls, on March 22 for attaining first place position in the Scott Interplant Damaged Case Contest. The department attained the highest percentage for the year 1948.

O. H. Miller, assistant traffic manager of the Scott Paper Co., presented to Charles Alden, leader of the local plant's shipping department, a plaque commemorating the achievement. John Hay, general manager of the New York mills, spoke, analyzing the record, pointing out what it means to the consumer of the products that these men are responsible for shipping. James Kirkpatrick, assistant to the vice-president in charge of distribution, gave a talk, using several charts in illustration.

Shipping department members honored were Charles Alden, Joseph Funicello, Clarence Brown, Lawrence Daniels, Joseph McIlvaine, and William Schmidt.

Special guests from Chester Pa., were Edward Meyers, contest coordinator, and George Daham, who is visiting the New York Plants on special traffic assignment. Other guests were Bloomfield J. Russell, superintendent of shipping; Albert N. Garrett, assistant to the manager at the local plant; Milford Griffin, Peter Nobile, Rozellah Abbott, Michael V. Williams and George Clossay, Jr., who was toastmaster.

N. F. Rail Rates Cut

OTTAWA—Canadian National Railways, which takes over the railway system of Newfoundland on April 1 as a result of the union of Newfoundland and Canada, has tentatively established freight rates on that railway system which are lower generally than those previously charged, with goods crossing Cabot Strait being classed as all-rail freight for the purposes of the Maritime Freight Act. The lower freight rates may be followed by lower water rates since the latter have always been lower than rail charges and the bulk of shipments to Newfoundland have travelled by water.

Back Forest Development

MOBILE, Ala.—The Railway Development Ass'n., of the Southeast held a two-day meeting here recently to map further industrial, agricultural and forest development in the areas their lines serve. The development agents are quoted as saying timber-conscious southeastern railroads "are solidly behind Dixie's growing pulp and paper industry."

Bradley San-Nap-Pak V.P.

NEW YORK—W. O. Bradley has been elected vice-president of the San-Nap-Pak Mfg. Co., Inc. He has been with the firm for 11 years.

Canadian Insulating Board

OTTAWA—Production of rigid insulating board in Canada dropped to 20,132,143 sq. ft. in February compared with 20,154,793 in January, though higher than the 15,369,370 produced in February a year ago and 16,813,554 in January last year, the Canadian Government reports.

Production in first two months this year rose to 40,286,936 sq. ft. as against 32,162,924 in same period last year. In the whole of 1948 such production advanced to 220,684,241 sq. ft. compared with 203,091,237 in previous year.

Domestic sales of rigid insulating board totalled 19,802,096 sq. ft. in February as against 19,557,418 in January and 13,585,393 in February last year or 14,338,561 in January last year. Sales in the first two months this year totalled 39,359,514 sq. ft. compared with 27,923,954 last year in same period.

Such sales in February, 1949, showed the following, with figures for same month last year in brackets: Panel Board, 14,903,680 (9,035,941) sq. ft.; Plaster Base Board, 1,747,242 (1,512,408); Roof Board, 1,776,399 (2,023,367); Miscellaneous Board, 1,374,775 (1,013,677).

Tall Oil Report

WASHINGTON—Production and consumption of tall oil were reported by the Bureau of Census during the week ending March 26 as follows:

Tall oil, crude, factory production in January, 21,875,000 pounds, compared with 20,010,000 in December; factory consumption, January, 13,238,000 pounds, compared with 12,091,000 in December; factory stocks, January, 38,019,000; December, 35,574,000; refined, production in January, 7,800,000; December, 6,350,000; factory consumption, January, 5,266,000; December, 4,587,000; stocks, January, 13,438,000; December, 12,358,000 pounds.

Brand Names Foundation

NEW YORK—John Foster Dulles, a member of the United States delegation to the General Assembly of the United Nations will be the principal speaker at the Brand Names Day luncheon in the Grand Ballroom of the Waldorf-Astoria, April 12.

Following the noon session on Brand Names Day, the luncheon audience will divide into five topical "working" clinics. These will be lead by 30 well-known executives in the fields of retailing, sales management, research, and community and employee education.

Bowater Extensions

CORNER BROOK, N. F. — Bowater's Newfoundland Pulp & Paper Mills Ltd. is completing extensions entailing an outlay of approximately $10 millions which will permit daily production to 1,000 tons of newsprint, plus 350 tons of sulphite pulp, one of the world's biggest.

Sirrine's Moon Speaker

ATLANTA—D. G. Moon, consulting engineer for the J. E. Sirrine Co., of Greenville, S.C., outlined the development of the pulp and paper industry in the United States and particularly in the Southern States, at a meeting of the Atlanta Chapter, American Society of Mechanical Engineers, on March 25.

In leading up to his subject of the engineers' part in the pulp and paper industry, Mr. Moon asserted the need for educating the woodlot owner on the value of his crop and in methods of conserving it. He pointed out that it has been estimated that, with good fire protection, planting and forest management, the pine growth in the South could be doubled. He emphasized the importance of this activity in his statement that pulp mills themselves today own or control somewhat less than half of the acreage required to produce the present use of nine million cords of wood in the South.

Canadian Tariff Change

OTTAWA—The Department of National Revenue, Canadian Government, reports the following tariff change by Order-In-Council, indicating that up to September 30, 1950, the undermentioned product is accorded the tariff treatment hereunder mentioned: Paper, in single sheets, containing not less than 144 square inches, not exceeding .012 and not less than .033 of an inch in thickness, specially processed, plain, punched, printed or not, for use in duplicating machines; British Preferential Tariff, Free; Most-Favored-Nation Tariff, 7½%; General Tariff, 35%.

Cancel April Meeting

CHICAGO — Because of the national Coating Conference sponsored by the Coating Committee of TAPPI, April 26-27, at Hotel Pantlind, Grand Rapids, the Michigan Division of the American Pulp & Paper Mill Superintendents Ass'n., Inc., will dispense with its April meeting. This decision was reached, according to O. W. Callighan, secretary-treasurer of the Michigan Division of the Superintendents Ass'n., because of the related interests and participation of members of both groups in the Coating Conference.

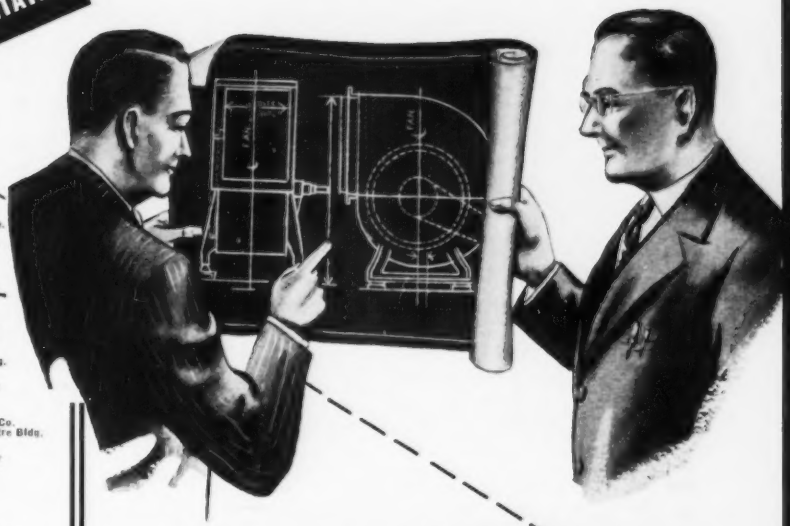
In Bankruptcy

SATURNA ISLANDS, B. C. — The M. & K. Logging Co., Ltd., has been adjudged bankrupt under the Bankruptcy Act and the Canadian Credit Men's Trust Ass'n., Ltd., Vancouver, B. C., has been named custodian of the estate, according to official notice filed in Ottawa.

PTA Award Winner

APPLETON, Wis.—Robert L. Boehm has been chosen by unanimous vote of the Institute of Paper Chemistry faculty to receive the annual student award of the Paper & Twine Ass'n., for 1949.

YOUR "Buffalo" ENGINEERING REPRESENTATIVE



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R. B. Taylor
966 Broadway

ATLANTA
J. J. O'Shea
305 Techwood Drive

BALTIMORE
Machinery and Equipment Sales, Inc.
1014 Cathedral St.

BOSTON 76
E. Daniel Johnson
(Melrose Station)
507 Main St.

CHICAGO 6
Emmert & Trumbo
20 N. Wacker Dr.

CINCINNATI 2
F. W. Twombly
626 Broadway

CLEVELAND 13
Weager & Sherman
418 Rockefeller Bldg.

DALLAS 1
T. H. Anspacher
1801 Tower Petroleum Bldg.

DAVENPORT
D. C. Murphy Co., Inc.
305 Security Bldg.

DENVER 17
Hendrie & Bolthoff Mfg. & Supply Co.
Terminal Annex D, Box 5110

DES MOINES 9
D. C. Murphy Co
840 Fifth Ave.

DETROIT 16
Coon-DeVisser Company
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GREENVILLE, S. C.
Roy A. Stipp
228 N. Main St.

HOUSTON 2
D. M. Robinson
407 Scanlan Bldg.

INDIANAPOLIS, IND.
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937 Architects & Builders Bldg.

KANSAS CITY, MO.
W. K. Dyer
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KNOXVILLE 12
C. F. Sexton
702 Empire Bldg.
P. O. Box 2224

LOS ANGELES 13
Halladay & Knauff
448 S. Hill Street

LOUISVILLE 2, KY.
Mr. H. M. Lutes
633 S. 5th St.

MEMPHIS
Humphrey-Wynne Co.
620 Sterick Bldg.

MIAMI 33
H. L. McMurry & Co.
P.O. Box 11
Coconut Grove Station

MINNEAPOLIS 2
E. Floyd Bell
2102 Foshay Tower

NEWARK 2
G. C. Norman
27 Washington St.

NEW ORLEANS 12
Devlin Brothers
1003 Maritime Bldg.

NEW YORK 7
Keithan & Johnson
39 Cortlandt St.

OMAHA, NEBR.
Wain Engineering Co.
415 Brandeis Theatre Bldg.

PHILADELPHIA 2
Davidson & Hunger
1200 Cunard Bldg.

PITTSBURGH 22
H. Lee Moore
345 Fourth Ave.

PORTLAND 5
Arthur Forsyth Co.
921 S. W. Oak St.

ROCHESTER 4
R. D. Moyer
846 Sibley Tower Bldg.

SAN FRANCISCO 9
Chas. W. Lockhart
1214 Central Tower Bldg.

ST. LOUIS 3
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Call in your nearest "Buffalo" Representative—his "Air Know-How" is at Your Service

READY AND COMPETENT
to work with your consulting engineer
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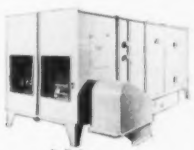
To make your investment in air pay you maximum dividends, it's more than a matter of buying a *good* fan or a *good* air conditioning unit. In today's complex air handling problems, proper selection of equipment is often the only answer—plus an effective *link* between your own engineer and the firm supplying the equipment.

This is one of the reasons why "Buffalo" installations have been so satisfactory to users. "Buffalo" equipment, a complete line of field-proven fans and air conditioning units—*plus* the "Buffalo" representatives at left—give you this ideal combination.

"Buffalo" representatives know their equipment and the jobs it is designed to handle. They are Graduate Engineers with one to five years of factory training, in addition to wide field experience. And they have all the resources of the "Buffalo" home plant engineering staff to back them up.

Buffalo Air Conditioning Cabinet



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Buffalo Limit-Load Fan

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Addresses Townspeople

NORTHAMPTON, Mass. — Lowell M. Birrell, chairman of the board of the San-Nap-Pak Mfg. Co., Inc., told local businessmen at a luncheon March 31 about new techniques of paper making, permitting the addition of wet strength to paper, may make other paper products of a disposable nature popular in the American home.

The luncheon was held by the San-Nap-Pak Manufacturing Co., Inc., to introduce to Northampton businessmen managers of its two Massachusetts plants in Northampton and in Wheelwright.

George Haberstro, formerly consulting engineer with Technical Managers, Inc., New York, has been named to head the company's Northampton plant. Walter Dempsey, formerly with the Scott Paper Co., has been named manager of the company's Wheelwright plant. They will report to T. W. Tinkham, recently named director of manufacturing.

Soda Supply Eased

WASHINGTON—Based on industry reports, the Department of Commerce reports that "Caustic soda and soda ash are in easier supply than at any time since the war."

Factors are an easing demand from glass container manufacturers, pending reduction of present glass stocks, and a leveling off of demand for caustic soda.

January production of soda ash reported by the Bureau of Census showed the following: total, wet & dry, 372,224 short tons; finished light, 205,400; dense, 110,102; natural, 17,133 short tons.

Production of caustic soda showed 150,994 short tons of liquid, and 28,161 tons of solid, electrolytic process; and for lime-soda process, 58,897 short tons liquid; 22,670 solid.

Va. Forestry Camp Dates

RICHMOND, Va.—Virginia's pulp and paper industry in cooperation with the State Forest Service and Agricultural Extension Service is sponsoring the annual forestry camp which will be held at Holiday Lake, Appomattox County, July 25-29.

J. W. O'Bryne, Virginia Tech forester in Blacksburg, explains that the camp is for boys of Virginia 4-H clubs and Future Farmers of America chapters. Mr. O'Bryne also announced the following schedule of forestry camps for professional agricultural workers: August 8-13, at Virginia State College, Petersburg; August 15-20 and 22-27, Green Bay, Prince Edward County.

Camps for professional workers are conducted by the State Department of Education and Virginia Tech.

Brown Atlas President

CHICAGO—Louis P. Brown has acquired the stock of the Epstein estate in the Atlas Paper Co., and is now president and sole owner of that firm.

Given Tax Refunds

WASHINGTON—Numerous paper companies and related concerns shared in substantial tax refunds for the fiscal year 1948, according to lists required to be made public by the Bureau of Internal Revenue.

Among those receiving refunds are: Halifax Paper Co., Inc., c/o Albemarle Paper Mfg. Co., Richmond, Va.; Randolph Paper Box Co., Inc., Richmond, Va.; Southern Container Corp., c/o Pennsylvania Box Co., Philadelphia; Eastern Paper Corp., Pittsfield, Mass.; Guild Bag Corp., Springfield, Mass.; Hampden Glazed Paper & Card Co., Holyoke; Holyoke Card & Paper Co., Holyoke; National Carton & Label Corp., Boston; National Paper Box Co., Inc., West Springfield, Mass.; New England Box Co., Greenfield, Mass.; Puget Sound Pulp & Timber Co., Bellingham, Wash.; Soundview Pulp Co., Everett, Wash.

Installed Chlorine Capacity

WASHINGTON—There is every indication that installed chlorine capacity will reach a total of approximately 2,000,000 tons per year during 1950, the Chemical Division of the Department of Commerce reports.

Chlorine attained a record output last year, the department reports, surpassing even war-time peaks. In addition to the extensive expansion already under way, still other additions are under consideration, it is said. The anticipated 2,000,000 tons for 1950 compares with 945,000 tons per year attained in December, 1941.

Present consumption is distributed among a growing number of industries, with the pulp and paper industry, and some miscellaneous uses, accounting for about a fourth of total output.

Rehabilitation—Expansion

MIDDLETOWN, Ohio — Richard L. Snideman, vice-president of Owens-Illinois Glass Co. and general manager of its American Coating Mills division, on March 21 disclosed the impending acquisition of the Prairie State Paper Mills plant. Rehabilitation and expansion already started will be completed by the Coating Mills division, Mr. Snideman said.

The plant will be shut down for what Mr. Snideman estimated will be about 90 days. Thereafter the local manager, W. A. Crawford, will operate the plant as part of the Coating Mills division.

The Middletown mill manufactured jute linerboard. With the completion of the improvement program it will also be equipped to manufacture folding boxboard.

Province Gets Mill Assets

QUEBEC — Assets of the long-shut Quebec Pulp & Paper Mill Co. in Chicoutimi now belong to Quebec Province, it was disclosed on March 28 by Premier Duplessis. Authorization for the acquisition of these assets — valued at $1,500,000 — was given the Government during the recent session of Parliament. Now an order in Council has been passed providing that the Ministry of Lands and Forests be authorized to purchase them.

Assets include timber limits on the Peribonka River, estimated at several hundred thousand cords of wood, and water power resources.

The Quebec Pulp and Paper Mills went into bankruptcy some 15 years ago, with a claim for nearly $2,000,000 for water as one of the principal liabilities.

Krug Discusses Alaska

WASHINGTON—Newsprint consumption in the U.S., is expected to reach 5,500,000 tons by 1960, Secretary of Interior Krug said in his annual report, discussing the need for development of Alaskan timber resources. Secretary Krug said "Alaska offers the solution to the problem of newsprint supply . . . The territory has vast, undeveloped spruce and hemlock forests," he continued. "It is estimated that under sustained yield management of the Alaskan forests, they could produce enough newsprint to meet about a quarter of our present national demand indefinitely . . . The Interior Department is continuing efforts to interest newsprint producers in the possibilities of Alaskan timber," he reported.

Vindicate Congoleum-Nairn

WASHINGTON—A complaint charging Congoleum-Nairn, Inc., Kearny, N.J., with misrepresentation of a product called "Treadlite Rubber Cushion Inlaid Linoleum" has been dismissed by the Federal Trade Commission.

In dismissing the complaint, the Commission said that the respondent's use of the words "linoleum" and "inlaid" to designate its product did not appear to be misleading or deceptive in view of the "public understanding and acceptance" of these words. In connection with the charge concerning the "cushioning qualities" of the product, the Commission noted that the respondent had discontinued all representations of this nature prior to the issuance of the complaint.

Bryant Co. Sold

WESTFIELD, Mass.—The Bryant Co., here has been sold to Cutler & Schermerhorn, Inc., of Chicopee, Mass. Bryant's president, Dietrich Thomes is vice-president of the new firm formed by the transaction.

Shaw Leaves Gov't Post

WASHINGTON—Merle B. Shaw, in the Paper Section of the National Bureau of Standards for 30 years, retired on April 1. He plans to return to his native state, Maine, to live.

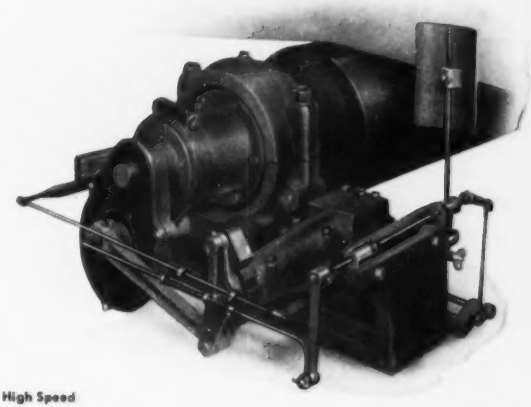
New Diamond Owners

SAUGERTIES, N. Y.—The Diamond Paper Mill, temporarily idle, is scheduled for reopening immediately under new ownership.

MOORE & WHITE Wire and Felt Guides are fully automatic —adjustable to variations in the width of the wire and felt. The single fender arrangement assures lighter contact with the wire or felt, thus less wear, longer life, and the resulting economies in material costs and time.

These Guides are adjustable to suit the speed of any machine and any size of journal. Gear-reduction can be arranged for high-speed machines. Guides are built in two sizes: A—for machines up to 120 inches; B—for larger machines. Your present ball bearings can be used in most cases.

Protect your costly Fourdrinier wires and your felts from needless wear . . . eliminate unnecessary down time. Write or call today for full information on Moore & White Wire and Felt Guides.



High Speed
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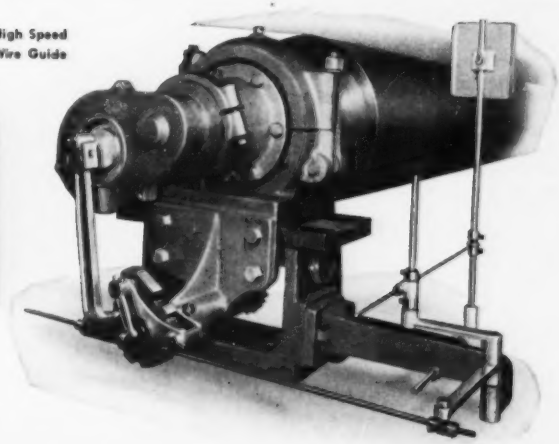
Today's MOORE & WHITE Automatic WIRE and FELT GUIDES are foolproof!



High Speed
Wire Guide

The MOORE & WHITE Company

15TH STREET AND LEHIGH AVENUE
PHILADELPHIA 32, PA.

Custom-Built Machines for Makers of Paper and Paperboard

Literature

Allis-Chalmers, Milwaukee, Wis. Booklet, "Allis-Chalmers Switchgear and Control Devices, 25B7095." Describes and illustrates rotary control switches, push button stations, generator voltage regulators, synchro-operators, current and potential transformers, oil and air circuit breakers, disconnect switches, oil immersed contractors, etc. Types and ratings on the various equipment also supplied.

American Forest Products Industries, Inc., 1319 18th street, N.W., Washington 6, D.C. Book, "Proof Book of Forestry Ads," "Eleventh Edition." Includes 36 proofs of new advertising mats in 2, 3 and 4 column size. Nineteen ads are on fire prevention, 11 on wood utilization, 6 on the advantages of tree farming, all carrying a fire prevention message and a number in cartoon style. Insert illustrates "Keep Green" mats in half-column size for each of 48 states, also mats of assorted designs. All mats are available gratis.

American Standards Ass'n., Inc., 70 East 45th st., New York 17, N.Y. Book, "American Standard Letter Symbols for Physics, Z10.6-1948". Thirty-six national societies, associations and governmental departments took part in the work which resulted in agreements on standard symbols for use in technical and scientific writing.

Ion Exchange Dept., Industrial Filter & Pump Mfg. Co., 1621 W. Carroll avenue, Chicago 12, Ill. Bulletin, "Industrial Water Demineralizers". Introducing a line of water demineralizers for industry. Illustrates and describes the various standard models available.

Wright Hoist Div., American Chain & Cable Co., Inc., York, Pa. Folder, DH-65, "Wright Speedway Electric Hoists". Introduces the ½ ton to 10 ton electric hoists, includes action photographs, illustrations of each type, cross-sectional view of hoist frame, and complete specifications.

American Hoist & Derrick Co., St. Paul 1, Minn. (Advertising Dept.) Catalog, No. 600-L-5, devoted to 25-ton diesel locomotive crane. Illustrates crane in action in magnet, bucket, hook and pulpwood work. Photographs of important mechanical features also included.

Paul O. Abbe Inc., Little Falls, N.J. Catalog V, "Dry and Paste Mixers". Illustrates and describes briefly Double Arm Paste Mixers, Ribbon Mixers, Double Cone Blenders and various types of Cylinder Mixers operating in horizontal and vertical positions.

General Dyestuff Corp., 435 Hudson street, New York 14, N.Y. Circular, G-566, "Igepal CA Extra In the Paper Industry." Describes advantages of new synthetic detergent, wetting, dispersing and emulsifying agent, represented to be the latest development in the field of non-ionic synthetic auxiliaries.

Globe Steel Tubes Co., Milwaukee, 4, Wis. Catalog, "Globe Welding Fittings", loose leaf, 3-ring. Provides sales copy, dimensional tolerances, material specifications, also dimentional chart of welded and seamless steel pipe.

Hooker Electrochemical Co., Niagara Falls, N.Y. Wall chart, "Recommendations for Safety in Use and Handling of Liquid Chlorine Cylinders and Ton Containers". Lists recommendations for storage, handling and use of liquid chlorine cylinders as well as emergency, first-aid and prophylactic measures. Chart is 18 x 23, printed in color on linen-backed paper. Suitable for hanging in places where chlorine cylinders are stored or used.

Hercules Powder Co., Inc., Paper Makers Chemical Dept., Wilmington, 99, Del. Booklet, "New Savings for Paper Makers". Sales copy on Automatic Emulsifying Process for Rosin Size, with equipment diagram and explanation of process.

Meetings

ASSOCIATION EXECUTIVES: Please send us your meeting dates and locations for this column as far in advance as possible. No charge for publication.

APRIL 11-14: National Ass'n. of Corrosion Engineers, Fifth Annual Conference and Exhibition, Netherlands-Plaza Hotel, Cincinnati, Ohio. For details, write to W. Z. Friend, NACE, 67 Wall Street, New York 5, N. Y.

APRIL 14-15: Production Conference, American Management Ass'n., Hotel Pennsylvania, New York.

APRIL 28: Technical Ass'n. of the Pulp & Paper Industry, Delaware Valley Section, Engineer's Club, 1317 Spruce Street, Philadelphia, Pa. For details, write to Miss L. V. Hans, secretary-treasurer, 1010 Delaware Avenue, Wilmington, Del.

MAY 2-4: Forest Products Research Society, Third Annual Meeting, Civic Auditorium, Grand Rapids, Mich. For further details, write to C. E. Van Hagan, Sec'y.-Treas., Forest Products Research Society, Box 2010, University Station, Madison 5, Wis.

MAY 10-12: Packaging Conference, American Management Ass'n., Auditorium, Atlantic City, N. J.

MAY 10-13: Eighteenth National Packaging Exposition, Public Auditorium, Atlantic City, N. J. For details, write to Mr. James O. Rice, Sec., 330 West 42nd St., New York, N. Y.

MAY 15-20: Third Annual New York Stationery Show, New Yorker Hotel, N. Y. For further details, write to George F. Little, Management, 220 Fifth Ave., N. Y.

MAY 19-20: Institute of Paper Chemistry, Thirteenth Annual Executives Conference, Appleton, Wis. For details, write to John G. Strange, secretary.

MAY 26: Technical Ass'n. of the Pulp & Paper Industry, Delaware Valley Section, Engineer's Club, 1317 Spruce Street, Philadelphia, Pa. For details, write to Miss L. V. Hans, secretary-treasurer, 1010 Delaware Avenue, Wilmington, Del.

MAY 26-27: Insurance Conference, American Management Ass'n., Hotel New Yorker, New York.

MAY 30-JUNE 2: Annual Convention, Chemical Institute of Canada, Halifax, N. S.

JUNE 1-3: Canadian Pulp & Paper Ass'n., 1949 Technical Section Summer Meeting, General Brock Hotel, Niagara Falls, Ont., Canada. For further details, write to Douglas Jones, Sec.-Engnr., Technical Section, Canadian Pulp & Paper Ass'n., 3420 University St., Montreal 2, P. Q.

JUNE 8-9: General Management Conference, American Management Ass'n., New York.

JUNE 15-17: American Pulp & Paper Mill Superintendents Ass'n., Inc., 1949 Convention, Chalfonte Haddon Hall, Atlantic City, N. J. For details, write to George W. Craigie, secretary-treasurer, 220 East Forty-second Street, New York City 17.

JUNE 17-18: Paper and Twine Ass'n., French Lick Springs, Indiana. For details, write to Mr. John L. Richey, Sec.-Treas., Suite 651-653, Hotel Sinton, Cincinnati 2, Ohio.

JUNE 27-JULY 1: Annual Meeting, American Society for Testing Materials, Chalfonte-Haddon Hotel, Atlantic City, N. J.

SEPTEMBER 21-23: Direct Mail Advertising Association, Inc., Annual Conference, Congress Hotel, Chicago. For details, write to Frank Frazier, Direct Mail Advertising Ass'n., Inc., 17 East 42nd Street, New York 17.

SEPTEMBER 26-29: National Paper Trade Ass'n., Fall Meeting, Stevens Hotel, Chicago, Ill. For further details, write to A. W. Chamberlain, Exec. Secy., National Paper Trade Ass'n., 220 East 42nd St., New York, N. Y.

OCTOBER 4-7: Fourth Annual Industrial Packaging & Materials Handling Exposition, Convention Hall, Detroit, Michigan. For further details, write to C. J. Carney, Jr., Managing Director, Soc. of Industrial Packaging & Materials Handling Engnrs., 20 W. Jackson Blvd., Chicago 4, Ill.

OCTOBER 10-14: West Coast Meeting, American Society for Testing Materials. (First national meeting of ASTM on West Coast.) Fairmont Hotel, San Francisco, California.

OCTOBER 24-28: National Safety Council, 1949 National Safety Congress, Chicago. For details, write to Harley B. Goodrich, National Safety Council, 20 North Wacker Drive, Chicago 6, Ill.

NOVEMBER 1-5: Pacific Chemical Exposition, California Section, American Chemical Society, San Francisco Civic Auditorium, San Francisco, Calif. For details, write to Marcus W. Hinson, exposition manager.

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Your guidepost to

HANDY CHLORINE

In your use of chlorine, the location of your source of supply is extremely important in getting delivery that you can count on. DIAMOND'S four chlorine plants at strategic locations mean fast, uninterrupted service to most parts of the country. Single unit tank cars are shipped from all four plants; multi-unit tank cars, from all except Pine Bluff; 150-lb. cylinders, from Houston and Painesville only. For a reliable, year 'round source of chlorine, use DIAMOND ALKALI. Consult your nearest DIAMOND Sales Office or write direct.

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DIAMOND ALKALI COMPANY • CLEVELAND 14, OHIO

DIAMOND ALKALI CHEMICALS

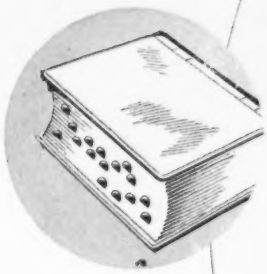
Canadian Imports, Woodpulp, Paper and Products

By Countries, 1948

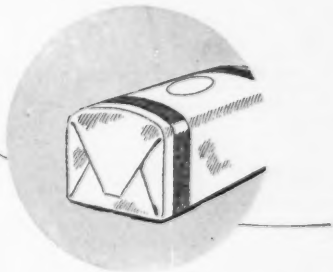
OTTAWA—The Canadian Government reports that imports of woodpulp, paper and products during the twelve months of 1948 showed the following in case of the United States, with figures for total exports to all countries being given to indicate the comparison of such shipments:

	Quantities (Cwt)	Values ($)
Sulphite Pulp BL Dissolving		
United States	64,866	591,896
All Countries	64,866	591,896
Sulphite Pulp Unbleached		
United States	505,902	2,686,885
All Countries	505,902	2,686,885
Sulphite Pulp Bleached NOP.		
United States	40,945	312,690
All Countries	40,945	312,690
Sulphate or Kraft Pulp		
United States	2,994	21,060
All Countries	2,994	21,060
Pulpwood (Cord)		
United States	67,528	1,254,351
All Countries	67,528	1,254,351
Wood Pulp Mechanical		
United States	17,796	65,262
All Countries	45,387	187,066
Pulp of Straw or Veg. Fibre		
United States	61,585	660,827
All Countries	62,329	684,022
Card Stock Bristol Board (Lb.)		
United States	741,167	130,364
All Countries	741,167	130,364
Chipboard News Board (Lb.)		
United States	653,491	40,159
All Countries	653,491	40,159
Millboard and Binders Board (Lb.)		
United States	3,900,574	262,934
All Countries	3,900,574	262,934
Pulpboard for Mfr. of Wallboard (Lb.)		
United States	15,261,024	712,648
All Countries	15,261,024	712,648
Pulpboard to Wrap Rolls Paper (Lb.)		
United States	3,034,024	152,409
All Countries	3,034,024	152,409
Strawboard (Lb.)		
United States	48,805	2,485
All Countries	48,805	2,485
Test Board for Containers (Lb.)		
United States	8,307	632
All Countries	8,307	632
Wallboard Building Board (Lb.)		
United States	13,581,241	535,903
All Countries	14,484,302	609,273
Pulpboard Other Fibreboard NOP (Lb.)		
United States	3,359,101	502,631
All Countries	3,403,920	513,411
Paperboard for Shoeboards (Lb.)		
United States	332,102	49,210
All Countries	332,102	49,210
Enamelled Paper (Lb.)		
United States	8,358	1,721
All Countries	8,358	1,721
Carbon Paper (Lb.)		
United States	177,965	147,688
All Countries	218,108	215,166
Book Paper for Periodicals (Lb.)		
United States	1,452,961	109,719
All Countries	1,466,192	110,307
Book Printing Litho Paper NOP (Lb.)		
United States	2,326,140	387,883
All Countries	2,450,207	416,052
Book Printing Paper Coated NOP (Lb.)		
United States	790,596	163,728
All Countries	790,596	163,728
Coated Papers for Periodicals (Lb.)		
United States	81,168	7,742
All Countries	81,168	7,742
Cover Papers Not Pasted Coated (Lb.)		
United States	146,582	30,815
All Countries	148,944	32,436
Cover Papers Pasted Coated (Lb.)		
United States	95,846	28,372
All Countries	103,909	33,735
Surface Coated Paper NOP (Lb.)		
United States	988,420	336,372
All Countries	999,867	344,621
Waxed Paper for Wrapping NOP (Lb.)		
United States	50,675	8,301
All Countries	50,675	8,301
Greaseproof and Glassine Paper (Lb.)		
United States	643,657	133,428
All Countries	645,787	133,953
Tissue Wrapping Paper (Lb.)		
United States	2,793	716
All Countries	8,864	3,467
Vegetable Parchment Paper (Lb.)		
United States	343,531	93,382
All Countries	343,531	93,382
Wrapping Paper Kraft (Lb.)		
United States	101,491	11,368
All Countries	101,491	11,368
Wrapping Paper Oiled Coated (Lb.)		
United States	306,814	35,109
All Countries	309,625	37,814
Wrapping Paper All Kinds NOP (Lb.)		
United States	618,753	66,072
All Countries	664,856	73,529
Duplex Backing Paper (Lb.)		
United States	800,560	265,469
All Countries	800,560	265,469
Wrapper Sheets and Heads (Lb.)		
United States	565,384	32,265
All Countries	565,384	32,265
Bond and Ledger Papers Uncut (Lb.)		
United States	2,230,197	295,883
All Countries	2,261,846	304,553
Envelopes (M)		
United States	2,212	12,167
All Countries	2,437	13,016
Onion Skin and Manifold Paper (Lb.)		
United States	183,214	124,418
All Countries	191,353	127,220
Boxed Paper and Papeteries (Lb.)		
United States	51,469	26,769
All Countries	56,246	29,397
Waste Paper		
United States	1,060,344	1,096,172
All Countries	1,082,399	1,188,801
Electric Cable Insulating Paper (Lb.)		
United States	1,298,838	460,163
All Countries	1,298,838	460,163
Photographers Papers		
United States		840,668
All Countries		891,923
Blotting Paper Not Printed (Lb.)		
United States	4,984	1,111
All Countries	6,622	1,407
Cigarette Paper Ungummed (Lb.)		
United States	1,257,856	587,520
All Countries	1,286,541	598,152
Crepe Paper Decorating Rolls (Lb.)		
United States	534	290
All Countries	534	290
Gummed Paper (Lb.)		
United States	283,731	90,490
All Countries	347,849	107,425
Hangings or Wall Paper (Lb.)		
United States	28,866	9,995
All Countries	37,651	12,711
Paper for Shot Shells Gun Wads (Lb.)		
United States	483,367	100,623
All Countries	483,367	100,623
Papiermache Ware NOP (Lb.)		
United States	4,350	2,179
All Countries	6,882	3,024
Paper Decalcomania (Lb.)		
United States	73,340	28,747
All Countries	158,505	55,612
Paper Matrix for Printing (Lb.)		
United States	873,650	217,519
All Countries	873,650	217,519
Paper Matting for Mfrs. (Lb.)		
United States	109,666	45,369
All Countries	109,666	45,369
Paper Photo Baryta Coated (Lb.)		
United States	1,233,738	371,474
All Countries	1,233,738	371,474
Shingles of Paper of Felt (Lb.)		
United States	7,856	490
All Countries	7,856	490
Roofing Sheathing paper Preprd. (Lb.)		
United States	2,339,478	217,670
All Countries	2,344,222	218,556
Tissue Paper NOP (Lb.)		
United States	632,922	90,037
All Countries	638,538	92,526
Toilet Paper (Lb.)		
United States	36,894	3,708
All Countries	36,894	3,708

TITANOX PIGMENTS



impart higher opacity to all types of paper



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TITANIUM PIGMENT CORPORATION

Subsidiary of NATIONAL LEAD COMPANY

	Quantities (Cwt)	Values ($)
Towels and Napkins (Lb.)		
United States	9,409	1,335
All Countries	9,409	1,335
Waxed Stencil Paper		
United States	49,649	67,779
All Countries	331,100	329,130
All Kinds of Paper NOP (Lb.)		
United States	2,537,499	704,932
All Countries	2,935,858	779,656
Tissue Paper for Stencils (Lb.)		
United States	249	381
All Countries	249	381
Facial Tissues Handkerchiefs (Lb.)		
Paper Napkins NOP (Lb.)		
United States	4,840,492	712,412
All Countries	4,840,492	712,412
United States	494	236
All Countries	38,150	16,851
Carbonizing Tissue Paper (Lb.)		
United States	272,547	68,566
All Countries	505,486	224,941
Cable Insulating Paper NOP (Lb.)		
United States	284,897	61,989
All Countries	484,053	99,478
Cash Register Paper (Lb.)		
United States	29,330	6,713
All Countries	29,537	6,895
Filter Paper (Lb.)		
United States	339,155	313,605
All Countries	342,677	315,712
Tabulating Paper and Stock (Lb.)		
United States	3,242,208	330,433
All Countries	3,242,208	330,433
Bags and Sacks of Paper (Lb.)		
United States	3,201,848	416,268
All Countries	3,203,000	416,786
Paper Protectors for Plants		
United States		22,574
All Countries		22,574
Containers Paperboard NOP (Lb.)		
United States	2,193,590	577,656
All Countries	2,197,736	580,024
Milk Bottle Caps of Paper		
United States		4,343
All Countries		4,343
Paper Tubes and Cones for Yarn (Lb.)		
United States	145,061	74,989
All Countries	154,526	78,071
Paper Patterns Boot and Shoe		
United States		26,626
All Countries		26,626
Pocket Sputum Cups and Refills		
United States		501
All Countries		501
Twine Yarn Paper for Furniture (Lb.)		
United States	61,130	16,852
All Countries	61,130	16,852
Window Blinds of Paper		
United States		1,525
All Countries		1,525
Manufactures of Paper NOP		
United States		2,105,220
All Countries		2,216,856
Paper Cores (Lb.)		
United States	2,633,632	87,287
All Countries	2,633,632	87,287
Paper Cups Dishes Tableware		
United States		11,249
All Countries		11,249
Paper Doilies and Lace Paper (Lb.)		
United States	50	25
All Countries	16,888	8,109
Paper Novelties Flowers Games		
United States		14,304
All Countries		23,114
Paper Patterns NOP		
United States		226,352
All Countries		226,389
Shipping Containers (Lb.)		
United States	5,229,373	507,028
All Countries	5,229,373	507,028
Trays for Packaging Apples (Lb.)		
United States	354,466	44,208
All Countries	354,466	44,208
Paper for Duplicating Machines (Lb.)		
United States	25,677	21,251
All Countries	25,677	21,251
Machinery 412A Paper Working		
United States		5,653,388
All Countries		5,748,515
Logging Machinery and Parts		
United States		4,905,758
All Countries		4,942,817
Paper Mill Machines and Parts		
United States		1,620,871
All Countries		1,764,507
Pulp Mill Machines and Parts		
United States		397,467
All Countries		399,675

Army-Navy

(Continued from page 42)

Spaulding Moss Co., Boston, Mass.—4,000 pads: from $.339 to $.374. 3,000 pads: to $.7055.

Inv. No. 4195—Brownprint—125 rolls Drawing Paper—5,000 sheets to:

Charles W. Speidel & Co., Inc., Phila., Pa.—125 rolls brownprint @ $19.14 per roll.

Eugene Dietzgen Co., Inc., New York City—5,000 sheets drawing paper: from $129.32 to $137.64 per M sheets.

Inv. No. 4243—Paper, blueprint—291,500 lbs. to:

Walker Goulard Plehn Co., Inc., New York City—291,500 lbs.: from $.2409 to $.2441 per lb.

Inv. N. 4201—Paper, waxed—354,000 lbs. to:

Crown Zellerbach Corp., Western Waxed Paper Co. Div. @ $.1449 per lb.

Inv. No. 4014—Envelopes, waterproof, 4" x 5"—320,000 each to:

Equitable Paper Bag Co., Inc., Long Island City, New York—from $.00897 to $.00974.

Inv. No. 4193—Paper, Computing—40,000 rolls to:

Enterprise Paper Co., Phila., Pa.—22,800 rolls: from $.0765 to $.1395.

Standard Paper Corp., NYC—1,800 rolls @ $.1180 per roll.

Getraer Bros. Paper Co., Inc., New York City—15,400 rolls: from $.1235 to $.1280.

Inv. No. 4210—Paper, duplicating, 17,100 reams to:

Boston Paper Board Co., Boston Mass.—17,100 reams: from $.57344 to $.94072.

Inv. No. 4278—Paper, Bond—15,400 reams to:

Walker-Goulard Plehn Co., Inc., New York City—price range: from $.49 to $4.44 per ream.

Inv. No. 4343—Paper, typewriter—6,000 reams to: Marquette Paper Corp., Chicago, Ill.—2,800 reams @ $1.30 per ream. Walker Goulard Plehn, Inc., New York City—2,200 reams: from $2.08 to $2.35 per ream. (1% 10 days). Herman Grover, New York City—1,000 reams @ $2.20 per ream.

Inv. No. 4310—Paper, index, various—2,170,000 sheets to: Marquette Paper Corp., Chicago, Ill.—1,188,700 sheets: from $19.31 to $20.68 per M sheets. Champion Paper Fibre Co., Hamilton, Ohio—263,000 sheets @ $22.27 per M sheets. (2%—30 days). Pulp & Paper Trading Co., New York City—710,300 sheets: from $.0198 to $.031 per sheet.

Tariff Board Appointments

OTTAWA—Francois Leduc of Montreal and William Wallace Buchanan of Selkirk, Man., have been appointed Commissioners of the Tariff Board of Canada for a period of ten years, bringing the board up to its full strength of three members. Hector B. McKinnon, of Ottawa, has been acting as chairman of the board for many years.

MEISEL MACHINERY IS HELPING IN ALL FIELDS

Cigarette Condenser | Wax Grease Proof | Photographic Snap-out Forms | Jet Propulsion Aero-engine Parts

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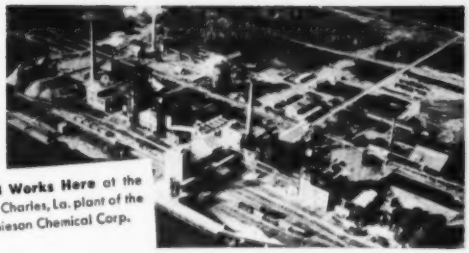
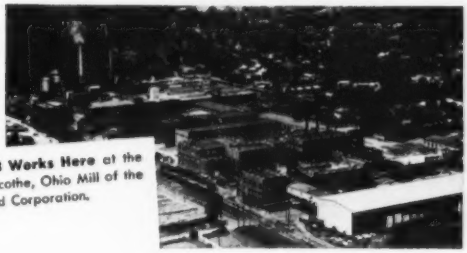


4+8 Works Here at the Lake Charles, La. plant of the Mathieson Chemical Corp.

4+8 Works Here at the Kodak Park plant of Eastman Kodak Co., Rochester, N.Y.

alkali OR FILMS



4+8 Works Here at the Chillicothe, Ohio Mill of the Mead Corporation.

4+8 Works Here at the Midland, Michigan plant of The Dow Chemical Company.

paper OR CHEMICALS

★ No matter what you process it will pay you to check into the Bailey simplified electronic control system.

With four basic circuits and eight basic component parts you can get more than 100,000 different electronic instrument and control combinations. Your problems of measuring and controlling flow, level, speed, pressure temperature, gas analysis, pH, conductivity, etc., can be solved by the right combinations of these 4 circuits and 8 basic parts.

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P-18

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Bailey Meter Company Limited, Montreal, Canada

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GAS ANALYSIS • LEVEL • RATIO

AMERICAN PAPER AND PULP ASSOCIATION'S PRODUCTION RATIO REPORT*

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1949		Corresponding Weeks—1948	
February 19	93.7	February 21	99.4
February 26	90.6	February 28	102.1
March 5	90.6	March 6	99.9
March 12	91.5	March 13	100.9
March 19 (Revised)	89.7	March 20	101.2
March 26	*87.8	March 27	*98.2

* Capacity in Tons—180,472. * Capacity in Tons—174,668.

COMPARATIVE MONTHLY SUMMARIES

1948				1949			
Jan.	100.1	May	100.5	Oct.	99.1	Jan.	94.6
Feb.	99.8	June	95.7	Nov.	97.1	Feb.	‡93.4
Mar.	100.8	July	85.3	Dec.	87.1		
Apr.	100.8	Aug.	96.8				
		Sept.	91.8	Year Avg.	96.2		

‡ Preliminary Ratios.

COMPARATIVE YEARLY SUMMARIES

	1942	1943	1944	1945	1946	1947	1948	1949
Year to Date	103.6	88.6	88.4	88.4	98.6	105.2	100.5	92.6
Year Average	90.4	87.8	88.1	89.4	101.1	104.3	96.2	

PAPERBOARD OPERATING RATIOS†

Current Weeks—1949		Corresponding Weeks—1948	
February 19	86	February 21	99
February 26	80	February 28	101
March 5	79	March 6	104
March 12	80	March 13	102
March 19	81	March 20	104
March 26	80	March 27	104

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1948	99	100	102	102	100	94	81	92	91	96	94	84	95
1949	88	85											

* All of the above data is based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association. Except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Association.

NPTA Convention

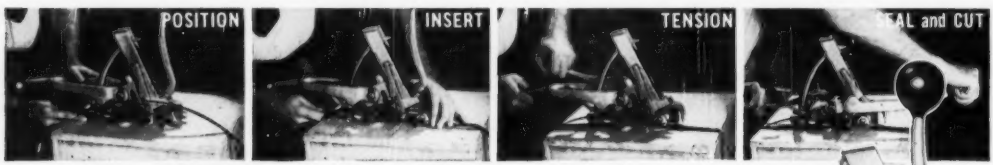
(Continued from page 15)

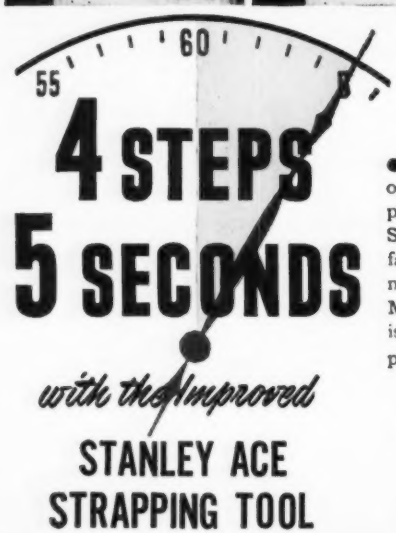
yesterday, we had the pleasure of listening to outstanding addresses by Bishop Corson and Senator Francis J. Meyers of Pennsylvania, both of which were very enlightening and inspirational. It brought back to my mind a statement made by Abraham Lincoln in one of his addresses. I quote:

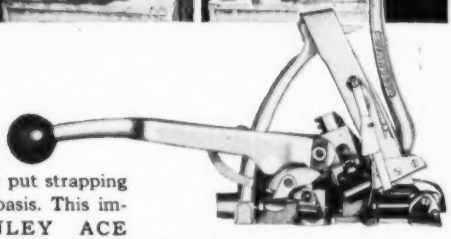
"It is in order that each one of you may have, through this free Government which we have enjoyed, an open field and a free chance for your industry, enterprise and intelligence.

It is for this that the struggle should be maintained."

At this morning's session, we were privileged in having Mr. Clark Everest address us on a subject that is a part of our everyday life and of vital interest to us as paper distributors. It was very encouraging to hear this very optimistic talk on what the future holds forth to the paper industry. I too believe 1949 will be a good year in the paper field even though our sales are off as compared to the past year. However, the fact still remains that we are far ahead in sales and profits as compared with a normal five-year average. We have a buyers' market, but that is traditional in America; it sharpens production facilities, distribution and sales. It cuts waste and eliminates detours, but in the end, should and can be worth the struggle. It is up to us, however, individually and as competitors of each other, to determine what our balance sheets are going to show in net profits at the end of the year. We want an open field and a free chance for our industry, but that does not mean destructive selling tactics.







● Here's how to put strapping on a production basis. This improved STANLEY ACE STRAPPING TOOL is light — fast — simple — even a beginner can make time with it. Magazine holds 75-100 seals — is easily loaded and seals in any position. The "Ace" is made in three different sizes, to handle 3/8", 1/2" and 5/8" strapping.

Decide now to put the "Ace" to work for you! Write for full information or ask for demonstration.

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AA-192

IMPORTANT NOTICE

TO ALL OWNERS AND OPERATORS OF *Camachine* MILL TYPE WINDERS

PNEUMATIC PRESSURE CONTROL

a Spectacular Improvement

IN CUTTER WHEEL PERFORMANCE

is now available for application to all existing mill type Camachines, both standard and narrow width. This cutter unit has also been adopted as standard on all new Camachine mill type winders (models 14, 18, 19 and 20).

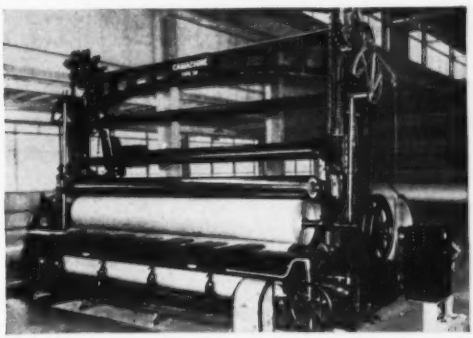
HERE'S WHAT IT DOES: With the new Camachine Pneumatic Cutter Units, uniform pressure is maintained on the complete set of cutter wheels, regardless of how many units are operated at the same time, and regardless of variations in the diameters of the cutter wheels. Also, the pressure is set and controlled at one point for the entire line, eliminating the need for individual adjustment of each cutter unit.

Pneumatic pressure control eliminates the danger of applying excess pressure on the individual unit—a fault which, on old-style spring-loaded cutters, often resulted in excess wear on the cutter wheels and costly downtime due to spring breakages.

Pressure on the entire line is controlled through a hand-operated valve. Changes of pressure to accommodate different thicknesses of paper or paperboard can be made instantly through a simple turn of the valve. In the event of a web break the cutter wheel pressure is released at once.

The Camachine Pneumatic Cutter Unit is one of several important post-war improvements which are offered as standard equipment on all new mill type Camachines. The extensive engineering, research and manufacturing facilities of the Cameron Machine Company are devoted exclusively to producing the world's most efficient slitting and roll-winding equipment.

BELOW: Camachine 20. Speeds up to 5000 fpm on newsprint.



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U. S. "Slave Labor" Myth

PORTLAND, Ore.—Three labor leaders from Italy, Guilo Pastore, Giovanni Canini and Appio Ricchi, investigating working conditions in the United States, agreed here on March 28 that everything looks good in America.

In nearly three weeks of inspecting industrial plants, talking to working people, they said they have found no evidence of workers being ill-treated or "slaves" as Communists in Italy have asserted.

Asked, "What are you going to tell the Communists when you return?" Mr. Pastore replied: "We will tell them we were not in Russia." Mr. Pastore is general secretary of an anti-Communist group.

The three were accompanied on their tour by Thomas Lane, chief of the ECA labor division, and James Toughill, an interpreter from the ECA.

The three Italians were taken through the Crown Zellerbach mill at Camas, Wash.

At San Francisco, where the party inspected Crown Zellerbach plants, Mr. Ricchi, who is an economist in the Republican party of Italy, commented that labor unions in America are more democratic and better organized than he had expected to find them.

Mr. Canini, 55, vice-secretary of the Italian Confederation of Labor, said labor-management relations in the United States strike him as excellent. Mr. Pastore, 47, the third member, is general secretary of the Free Italian Confederation of Workers, an anti-Communist group.

The visit to America grew out of charges made by Italian Communists that J. D. Zellerbach, head of the ECA in Italy and president of the paper making firm, had "slave labor" in his paper mills. Mr. Zellerbach arranged for the three labor leaders to come see for themselves.

Fiber Uncertainties

WASHINGTON—World supply of raw jute and such hard fibers as manila and sisal faces many uncertainties under present conditions, Secretary of Commerce Sawyer reports in discussing further export control requirements for various critical commodities.

In the case of jute, he states, the world outlook for 1949 depends in large measure upon the degree of political and economic cooperation between the two areas that between them account for 98 percent of world supply, India and Pakistan. At present, United States consumption is running somewhat higher than the ten percent of world consumption that we accounted for prior to the war. The U. S. takes about two-thirds of the burlap entering world trade from India, with imports of burlap and other woven sacking about equal to pre-war.

On a world-wide basis, he continued, manila and sisal, also are short, the shortage being more pronounced in the higher grades. Philippine plantations, source of most of the world stocks, are still feeling the war's effects, as well as the results of overstripping in 1946 and 1947. About a fifth of the world supply is now coming from Central America, where wartime expansion occurred.

Exports of raw jute from the U.S. are still rigidly controlled, and in the case of hard fibers, exports are described as negligible, with such shipments as are approved confined to the lower grades.

St. Croix Modernization

WOODLAND, Maine—As part of a two-year modernization program designed to stabilize its electric power supply, the Saint Croix Paper Co., has ordered from General Electric more than $425,000 worth of electric apparatus.

According to a paper company spokesman it intends to install enough generating equipment so that the uncertain flow of the St. Croix River, present unreliable source of hydroelectric power, will not affect the plant's daily output.

The order for G-E equipment includes two 750-hp mechanical-drive turbines, a 6,250-kva capacity steam-driven turbine-generator set, a 3,000-kw generator which will be used with an existing turbine, a 5,200-hp synchronous motor to drive an existing 3,750-kva generator to make up a frequency converter set, and metal-clad switchgear. With this new apparatus, the mill will undergo a basic power system change from 25 cycles to 60-cycles.

In addition, St. Croix has ordered a 4,000-hp, 60-cycle grinder motor.

The mechanical-drive turbines, utilizing available steam pressure, will drive the company's Nos. 1 and 2 paper machines. The new 6,250-kva and the frequency-changed 3,750-kva units together will supply 8,000 kilowatts of 60-cycle power to the papermaking process in addition to the present 25-cycle capacity.

The new apparatus is expected to be shipped late in 1949 or early in 1950.

Camas "Open House"

CAMAS, Wash.—Plans are being laid for the first open house to be held in the Crown Willamette mill since the war. Three days, April 21-23 will be set aside this year for the purpose, with the public invited to visit the mill between 1:30 and 8:30 p. m., when specially conducted tours of the plant will be offered.

Special displays will be arranged throughout the mill, the better to show its products and the processes whereby they are created.

Purpose of the open house is to familiarize the public with the paper industry as it operates in Camas and everyone is cordially invited to visit the mill and see what goes on within the walls.

Import Restrictions Off

OTTAWA—The Canadian Government has removed all import restrictions originally imposed on account of the shortage of U.S., dollars on gummed paper, printed or not; and certain lumber, including veneers and plywoods. At the same time, pictorial post-cards, greeting cards and similar artistic cards or folders, finished or unfinished, have been transferred from the prohibited list of imports to the quota list.

The relaxation on pictorial and greeting cards will enable United Kingdom manufacturers to re-enter this market in Canada for the coming Christmas season, officials say here.

Engineers, Club Guests

TACOMA, Wash.—The Tacoma Engineers Club entertained the American Institute of Chemical Engineers on March 15 with afternoon tours of four Tacoma industrial plants, followed by dinner, a business meeting and a talk by J. H. McCarthy, chief engineer for St. Regis Paper Co.

The plants to be visited include Permanente Metals Corp., Pennsylvania Salt Mfg. Co., St. Regis Paper Co., and the Tacoma Smelter.

Building

- **FOR THE PAPER INDUSTRY**
- We design, build, and equip paper and pulp mills . . . steam generating plants . . . and facilities for eliminating stream pollution.
- Under one contract and one responsibility, we deliver jobs complete, ready for operation.
- We also furnish engineering reports and surveys. Current cost data available at all offices.

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INDUSTRIAL ENGINEERS AND BUILDERS

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OFFICES IN NEW YORK, HOUSTON, CHICAGO, CINCINNATI AND LOS ANGELES

Oswego Falls Election

FULTON, N.Y.—All nine directors whose terms have expired were unanimously reelected to serve one-year terms at the annual meeting of stockholders of the Oswego Falls Corp.

They are: Frank C. Ash, H. C. Estabrook, H. M. Gray and Culver M. Lussier, all of Fulton; J. L. Dolphin, G. W. Lee, A. B. Merrill and E. W. Skinner, all of Syracuse, and F. D. Everett of New York.

The stockholders authorized the directors to issue additional first mortgage bonds this year to provide more working capital with respect to the three-year program of modernization and increasing the capacity of the company's boiler facilities.

Officers named by the new board of directors include: Frank C. Ash, president; E. W. Skinner, vice president; C. M. Lussier, treasurer; H. C. Estabrook, secretary, and assistant treasurer, and A. M. Hurd, assistant secretary.

ECA Authorizations

WASHINGTON—ECA authorizations for paper and paper products the week ended March 19 the following:

For Ireland, second quarter, 1949, paper, paper and products except newsprint, $412,000, from Canada and Newfoundland; there was a decrease of $14,000 in the amount originally authorized for paper and products for Ireland in the first quarter, which was to be obtained from United States sources.

A decrease of $1,008,000 also was ordered in the amount authorized for paper and products for Italy, in the first quarter, also scheduled to be obtained in the United States.

The total of pulp, paper and paper products authorized the past week, including the above and others, was $7,400,000.

Urges Wood Waste Research

WASHINGTON—Expenditure of Federal funds for research into ways of utilizing wood waste, is advocated by Rep. Russell V. Mack, of Washington State.

"Today 57 percent of the wood in all trees cut down by loggers goes to waste, either in the wods or in manufacturing and milling processes," he comments. The waste, he said, is equivalent to 2,500,000 carloads annually.

"If we can find commercial use for this wood waste," said the Congressman, "hundreds of thousands of new jobs would be created in American forest-products industries.

"It seems to me good business for the Federal government to spend reasonable sums to discover new products to create new payrolls."

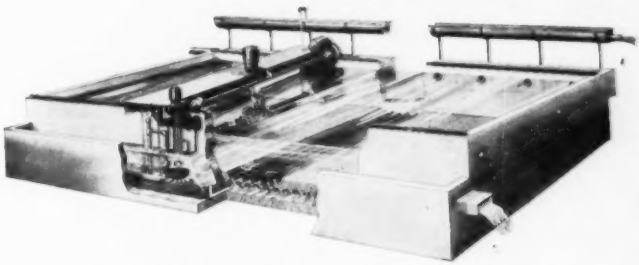
St. Regis Service Awards

WATERTOWN, N. Y.—Twenty-three employes of the St. Regis Paper Co., who have served 25 years in its Northern New York mills were honored at a testimonial banquet at St. Regis Inn, Defereit, on March 31. Each of the 23 received a 25-year service pin and a scroll. Twelve of the veteran employes are from the Deferiet mills, two from Norfolk, one from Harrisville, two from the St. Regis machine shop, one from the Taggart mill at Oswego, two from the Taggart mill in Watertown and three from the Taggart mill at Herrings.

Guest speakers were B. R. Cancell and William R. Adams, St. Regis, vice-presidents, and W. E. Hahn, vice-president of the Taggart Corp.

Mills, plants and offices ff the St. Regis Co. in al sections of the country and in Canada recently engaged in an annual program of distributing service pins. The emblems represent five, ten, 15, 20 and 25 years of service or longer. A total of 1,100 of the 14,000 employes of St Regis became eligible in 1948 for service awards.

IT CLEANS ITSELF . . .
while filtering!



The Hardinge Automatic
Backwash Rapid Sand Filter
For Paper Plant Water Supply

Here is a sand filter which cleans itself—automatically—with no interruption whatever to the filtering operation. No shut-down or change-over is necessary while cleaning is in progress.

The secret lies in its special, compartmented filter bed and traveling backwash mechanism which automatically cleans one compartment at a time—on a pre-determined time cycle or with increase in head pressure.

And . . . it's highly efficient, removing 75% to 80% of the suspended solids—90% or better if chemicals are added.

May be used for paper plant supply water or for recovery of fibre and filler from "white water." Write for Bulletin 46-14.

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COMPANY INCORPORATED
YORK, PENNSYLVANIA — 240 Arch St. • Main Office and Works
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Obituary

Willard H. Dow, president of the Dow Chemical Co., Midland, Mich., was killed in a plane crash at London, Ont., March 31, while enroute to Boston. Killed in the same accident were his wife, Mrs. Martha (Pratt) Dow. Surviving Mr. and Mrs. Dow are a son, Herbert, a student at Massachusetts Institute of Technology; and a daughter, Mrs. McCauley Whiting.

A. J. Bowie, Midland, Mich., Dow Chemical Co. air pilot, was killed when the plane which he and Fred Clement were flying to Boston crashed at London, Ont., on March 31.

Fred Clement, Midland, Mich., Dow Chemical Co. air pilot, was killed at London, Ont., when the plane which he and A. J. Bowie were piloting to Boston crashed on March 31.

Jacob Gabrelow, for many years a partner in the Sun Paper Box Co., New York City, died at his home in Elizabeth, N. J., on March 24, following a brief illness.

John E. Hollwedel, Jr., 32, stationery salesman for Davis & Holly, Inc., selling agent in New York, died in New Rochelle Hospital, New Rochelle, N.Y., on March 10. His home was in Rye, N. Y. Surviving are his widow, Mrs. Sheile Egan Hollwedel; two sons, Dennis and Jay; his parents, Mr. and Mrs. J. Edward Hollwedel, and a sister, Miss Cherie Hollwedel.

Andrew L. Merlin, former president of the Merlin-Keilholz Paper Co., New York City, died at his home in Brooklyn on March 17. Surviving are his widow, Mrs. Aimee A. Merlin; a daughter, Mrs. Joseph Scheuerman; four brothers, Walter, Howard, Reginald and Gordon; and a sister, Mrs. Maud Clark.

H. F. Branham, vice-president and general manager of the Southern Paper Co., Knoxville, Tenn., died in East Tennessee Baptist Hospital on March 20, following a two-week illness. Surviving Mr. Branham are his widow, two sons and a daughter.

Verne C. Smith, 78, president-treasurer of the Clinton Paper Co., Clinton, Iowa, died at Jane Lamb Hospital in that city on March 7. Surviving are his widow, Mrs. Hattie Wheeler Smith; a son, Donald W., and a daughter, Mrs. Harry Beall.

Arthur Burley, chief clerk in the traffic department of the International Paper Co., New York City, died at his home in Queens on March 15. Surviving him are three sisters, Mrs. Margaret Mathews, Mrs. Arnold Gelinar and Mrs. Annie Beresford.

Edward Adolph Weber, 70, sulphite superintendent of the Oregon Pulp & Paper Co., Salem, Ore., mill, died of a heart attack on March 24. He had been superintendent of the mill for 20 years. Surviving him is a son, F. E. Weber.

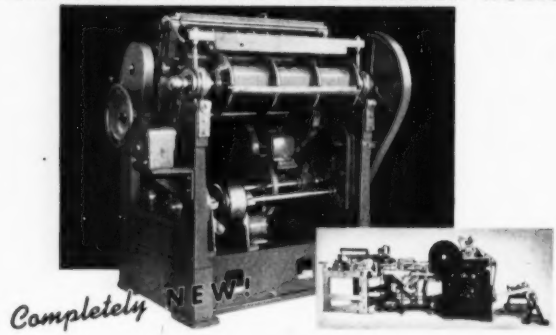
William John Lewis, who was a director of the Capital Carbon Co. and Allied Paper Products, died at his home in Ottawa, Can., on March 24 after a long illness. He is survived by one brother and three sisters.

William S. Lee, 51, executive vice-president of Sealright Pacific, Ltd., Los Angeles, died suddenly in Palm Springs, Calif., on March 19. Mr. Lee joined the Sealright organization in 1921.

Alcide Michaud, 61, of Ottawa, Can., who for 35 years was a machine tender with the E. B. Eddy Co., died in a local hospital here on March 28. He is survived by three daughters.

Henry J. Macfarlane, 55, head of the H. J. Macfarlane Paper Specialties Co., New York City, died at his home in Bronxville, N. Y., on March 10.

FOR SPOT CUTTING PRE-PRINTED ROLLS



SMITH & WINCHESTER

ROTARY SPOT CUTTER

For precision register and accurate spot cutting of pre-printed traveling webs at a high rate of production. This high speed rotary cutter can be equipped with photo-electric compensator or may be manually controlled. Save time, eliminate waste and increase production with this modern S & W equipment. Built in 40", 50", 60", 71" and 83" widths. May be furnished with lay boy and stacker as illustrated. *Write for detailed information!*

THE SMITH & WINCHESTER MFG. CO.
SOUTH WINDHAM, CONNECTICUT
Paper and Paper Bag Machinery Since 1828

Hammermill Personnel

ERIE, Pa.—The Hammermill Paper Co. has named George J. Smart district sales manager of the Eastern territory and Gilbert P. Bothwell assistant district manager. Both formerly at the Erie office now work out of Hammermill's New York City office. John E. Franzen, formerly manager of the New York City office, has been made manager of sales research, and will be on the staff at Erie.

Hammermill has also established a Chicago officce at 1 LaSalle street, to serve its Midwestern terrtiory. William W. Woodbridge is district sales manager of the Midwestern Territory and is assisted by Glenn R. Spicer as ristrict sales representative.

Robert F. McMahon is the new district sales manager of Hammermill's Southern territory while Harold B. Wilson, as district sales representative, is now assisting Harry R. Landers, district sales manager of the Central sales territory. Mr. Wilson also continues as assistant advertising manager.

In other developments, Wilbur T. Eldredge has been named acting manager of product development; Douglas E. Hefferan, supervisor of safety paper sales and John Studeny, supervisor of technical paper sales.

Clinton's

PM 3011
Pearl Starch

(For enzyme conversion)

● Specifically processed and controlled for ease of conversion under all practical mill conditions. Also, special grades of starch for:

- BEATERS
- COATING
- LAMINATING
- TUBSIZING
- CONTINUOUS ADDITION

CLINTON

CLINTON INDUSTRIES, INC., CLINTON, IOWA

GRABS FOR EVERY KIND OF LOG HANDLING!

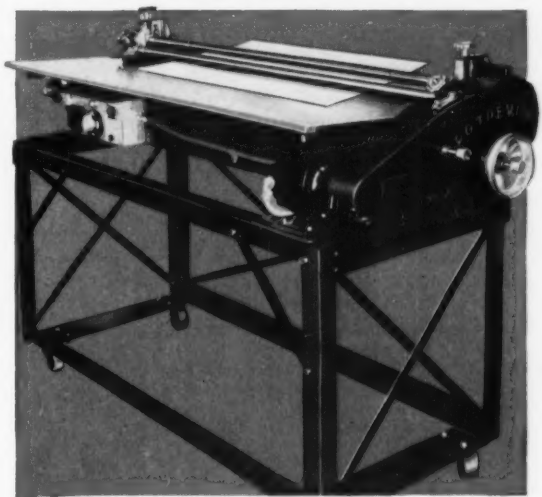
WELLMAN
WOOD GRABS

Handle stacked logs faster!

Write for Bulletin P3-112 describing this and other types

THE WELLMAN ENGINEERING COMPANY
7028 Central Ave. · Cleveland 4, Ohio

WELLMAN BUILDS:
SPECIAL CRANES
MINE AND SKIP HOISTS
ORE BRIDGES
CLAMSHELL BUCKETS
DRAGLINE BUCKETS
CAR DUMPERS



GLUE MILL ROLL
HEADERS
ON A POTDEVIN

A heavy duty 39 or 46 inch Potdevin Gluer will handle your header labels fast. Glued labels come through at 6 inches per second. Potdevins apply a controlled film of glue—for strong all-over adhesion to insure a tightly sealed wrapper. Potdevin Gluers are portable—can easily be moved wherever rolls are being "headed." Mail the coupon for more details.

Please send full information about 39 and 46 inch heavy duty Potdevin Gluers.

Name and Title.....

Company.....

Street.....

City..... Zone..... State.....

POTDEVIN
MACHINE CO.

1223—38th Street, Brooklyn 18, New York

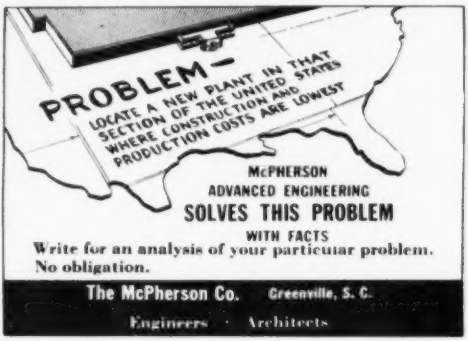
Restigouche

BLEACHED SULPHITE PULP

for the manufacture of Cellophane, Rayon and Products of Paper.

RESTIGOUCHE COMPANY, LTD.
Campbellton, N. B., Canada

CHAS. T. MAIN, INC.
CONSULTING ENGINEERS
Process Studies, Design, Specifications and Engineering Supervision
PULP AND PAPER MILLS
Steam, Hydraulic and Electrical Engineering
Reports, Consultation and Valuations
80 Federal Street — Boston 10, Mass.



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ADVANCED ENGINEERING
SOLVES THIS PROBLEM
WITH FACTS
Write for an analysis of your particular problem. No obligation.
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Engineers · Architects

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PULP MILLS — PAPER MILLS
IMPROVED PROCESSES — DESIGNS — REPORTS
420 Lexington Ave. — New York City

LANGSTON
Slitters and Roll Winders

Type "AA" — one of five sizes and types built for every grade of paper.

SAMUEL M. LANGSTON COMPANY, Camden, N. J.

C. M. GUEST & SONS
Builders
GREENSBORO, N. C. — ANDERSON, S. C.
Paper & Pulp Mills • Waste Disposal • Water Filtration
Steam Power Plants • Process Piping • Textile Mills
SERVING THE INDUSTRIAL SOUTH for MORE THAN FIFTY YEARS

GEORGE F. HARDY & SON
Mill Architects & Consulting Engineers
441 Lexington Avenue, New York 17, N. Y.
Established 1894
John A. Hardy — August F. Hartman, Thomas T. Whittier
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Consultation, Reports, Valuations — Paper and Pulp Mills, Hydro-Electric and Steam Power Plants
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DEINKING — DECOLORIZING
K-121-B and K-140
COOKING PROCESSES
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200 FIFTH AVENUE, NEW YORK 10, N. Y.
Consultation, Reports, Valuation and Designs for the Construction and Equipment of Steam and Hydro-Electric Power Plants Dams and Other Hydraulic Structures Pulp and Paper Mills

THE RUST ENGINEERING COMPANY
Engineers and Constructors
Pittsburgh, Pennsylvania
Complete Service for
PULP AND PAPER MILLS—PLANTS AND FACILITIES.
DESIGN, CONSTRUCTION, MODERNIZATION

FREDERICK WIERK
CONSULTING ENGINEER
P. O. Box 492 — Great Neck, N. Y.
Reports and Designs for Construction or Modernization of Pulp & Paper Mills, Steam and Hydro Power, Converting Plants, Stream Pollution Abatement.

Supplying Your Requirements

AMERICA'S LEADING INDEPENDENT WASTE PAPER PACKERS

WASHINGTON, D. C.
PHILADELPHIA, PA.
NEW YORK, N. Y.

THOMAS PAPER STOCK COMPANY
860 W. Evergreen Avenue • Chicago 22, Ill.

Price & Pierce ltd
Pulp & Paper agents
60 E.42 ST. N.Y. 17.

WEST VIRGINIA PULP and PAPER COMPANY

230 Park Ave.
New York 17, N. Y.

35 East Wacker Drive
Chicago 1, Ill.

Public Ledger Building
Philadelphia 6, Pa.

503 Market St.
San Francisco 5, Calif.

Manufacturers of West Virginia Mill Brand Papers

SUPERCALENDERED	ENVELOPE
ENGLISH FINISH	MIMEOGRAPH
LITHOGRAPH	INDEX BRISTOL
LABEL	POST CARD
OFFSET	COVER
EGGSHELL	CUP AND CONTAINER
MUSIC	FILE FOLDER
POSTER	TAG
BOND	COATED
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KRAFT CONVERTING AND KRAFT ENVELOPE
KRAFT LINER BOARD

MILLS

Mechanicville, New York
Luke, Maryland
Covington, Virginia
Tyrone, Pennsylvania
Williamsburg, Pennsylvania
Charleston, South Carolina

EXCELSIOR KNOX Woolen Co. Camden Me. FELTS & JACKETS

"EXCELSIOR" FELTS

Manufacturers of Felts of Superior Quality
for Every Grade of Pulp and Paper

KNOX WOOLEN COMPANY
CAMDEN, MAINE

CLEARING HOUSE

HELP WANTED

TWO SALESMEN WANTED

- To sell grocery bags and wrapping paper to jobbing trade and large chains
- Salary and traveling expenses — must have experience
- One must reside in territory of N. & S. Carolina, Georgia, Alabama and Florida
- Other must reside in Chicago and cover adjacent territory
- We are well established Company
- Write full details in first letter

Address Box 49-176
c/o Paper Trade Journal A-7

WANTED DEVELOPMENT ENGINEER

Graduate engineer for development work on corrugated containers and container testing at large corrugated box plant in Southeast. Several years experience in design, evaluation, and manufacture of corrugated containers required. Box 49-179, care Paper Trade Journal. M-12

SALARIED POSITIONS $3,500—$35,000

If you are considering a new connection communicate with the undersigned. We offer the original personal employment service (39 years recognized standing and reputation). The procedure, of highest ethical standards, is individualized to your personal requirements and develops overtures without initiative on your part. Your identity covered and present position protected. Send only name and address for details.

R. W. BIXBY, INC.
117 Dun Bldg., Buffalo 2, N. Y.
TF

WANTED—TOUR BOSS. Large Writing Paper Mill. Must be familiar with sulphite and rag writing papers. The mill is located outside of Philadelphia. Address Box 49-125 care Paper Trade Journal. A-7

WANTED—Machine Tender and a Beater Engineer with cylinder machine experience. Mill located in Eastern State. Address Box 49-165 care Paper Trade Journal. A-7

MACHINE TENDERS first class for fast running fourdrinier Yankee Machines on facial tissue. Mill located in upstate New York. Good wages and working conditions. Only first class men need apply. Address Box 49-185 care Paper Trade Journal. A-14

HELP WANTED

MEN WANTED
Positions Open

Assistant industrial relations director; carton estimator; boss machine tender (Fourdrinier), must be strong on colors.
Chemist for paper board products, analysis and routine work; young chemist with technical education to work on carbon papers; mechanical engineers; chief power plant engineers; machine tenders and back tenders.
Chemical Salesman with or without previous sales experience.
Salesman to sell paper to converters, bag manufacturers and food packers in New England territory.
We invite correspondence (confidential) with mills seeking executives and with executives seeking new positions.

CHARLES P. RAYMOND SERVICE, Inc.
294 Washington St., Boston, Mass.
A-7

WANTED
PAPER RESEARCH CHEMIST

to supervise group of 6 to 8 men on development of paper products in research laboratory of upper midwest manufacturer of bleached groundwood sulphite and kraft printing and converting papers. Must be well grounded in paper chemistry and manufacturing processes with development experience in these fields. Prefer man 30 to 40 years old with a good knowledge of book grade bleached papers and enamel grade coated papers. In reply give personal history, training, experience and salary expected.

Address Box 49-52, care Paper Trade Journal. TF

SUPERINTENDENT WANTED for midwest mill making Folding Boxboards, Specialty Boards, Liner and Corrugating Medium. All replies kept strictly confidential. Address Box 49-183 care Paper Trade Journal. A-14

SITUATIONS WANTED

RESEARCH DIRECTOR AND CHIEF CHEMIST —with a large paperboard and specialty mill for 12 years, many successful developments, finds change necessary. Health and appearance good, married, with family, desire permanent position with well established company. Expect salary to start less than now received. Address Box 49-133, care Paper Trade Journal. A-7

ASSISTANT to Plant or Utilities Engineer: EE, age 26, 27 months general paper mill, steam and hydroelectric experience. Address Box 49-186 care Paper Trade Journal. A-14

SITUATIONS WANTED

PAPER MANAGER

45, neat appearance, intelligent, educated, very good at figures, experienced all types paper and board, seeks executive or representative position in New York. Mill, converter or dealer. Box 49-173 Paper Trade Journal. N.C.

BEATER ENGINEER—wants position after April 1st. Married, temperate habits. Accustomed to all grades rag or wood. Address Box 49-118 care Paper Trade Journal. A-7

ENGINEER—MGR. 26 years experience in the pulp, paper and board industry in plant operating and engineering supervision. Extensive background of chemical and semi-chemical pulping. Production, maintenance, power and construction. Invites correspondence. Address Box 49-155 care Paper Trade Journal. A-14

PLANT MANAGER—Thorough experience in converting paper and boards; wants change to position offering better opportunity. Excellent production and labor relations background. Address Box 49-15 care Paper Trade Journal. A-28

MANAGER SMALL BAG PLANT—Coffee Bags, grocery, sacks. Thorough knowledge of production control, labor relations, purchasing and general administration. Cost and quality conscious. Will consider position as assistant to owner or general manager who is overburdened with details. Address Box 49-172 care Paper Trade Journal. A-7

ENVELOPES, SPECIALTY BAGS, PAPER CONVERTING SUPERVISOR. To the busy owner—if you are making too much money, or if you are in the hands of receivers —then you don't need my services. BUT—if your plant is top heavy, or, having high percentage of rejects, and can stand additional intelligent, economical and judicious administration, THEN YOU NEED MY SERVICES. Address Box 49-170 care Paper Trade Journal. A-21

ATTENTION PAPER EXPORTERS—Man, thorough knowledge paper export, L/C, documentation, Consular docs., invoices, traffic. Also contacts in all shipping fields. Fluent Spanish. Veteran, married, 28. Address Box 49-182 care Paper Trade Journal. A-7

FOR SALE

FOR SALE—2 Ply Laminator—Combines any combination of Paper and Board—50" wide; Rewinds up to 60" diameter rolls. Can be seen running. Priced right. Address Box 49-181 care Paper Trade Journal. TF

FOR SALE:—SMALL PAPER MILL-CYLINDER MACHINE. Situated advantageously to sources of raw material and sales outlet. Terms. Address Box 49-153 care Paper Trade Journal. A-7

RATES FOR CLASSIFIED ADVERTISING

HELP WANTED—10c a word. Double rate for heavy face type. Minimum charge $2.50.

SITUATIONS WANTED—10c a word, double rate for heavy face type. Minimum charge $2.50. If repeated ½ rate will be charged for each consecutive repetition.

FOR SALE—10c a word. Double rate for heavy face type. Minimum charge $2.50.

WANTED—10c a word. Double rate for heavy face type. Minimum charge $2.50.

OPPORTUNITIES—10c a word. Double rate for heavy face type. Minimum charge $2.50.

Classified advertising space may also be purchased at $5.00 per single column inch. All classified advertisements are payable in advance. If box number is used—70 cents additional.

Address replies to advertisements appearing under Box Numbers in care of PAPER TRADE JOURNAL, 15 West 47th Street, New York 18, N. Y.

Mills in low-lying areas subject to periodic basement flooding have their problems—often a matter of only a few feet of water forcing the mill down.

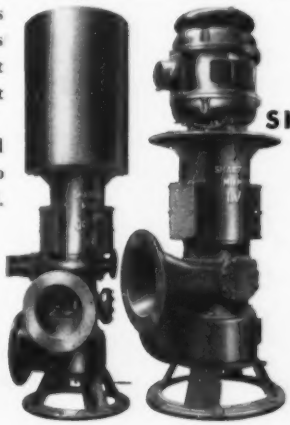
To meet just such conditions certain Shartle-Dilts agitating and pumping equipment is being installed.

Class "LV" Agitator, which is the same as the regular Class "L" except that it is built vertical and has a water-tight motor hood.

Vertical Agi-Flo agitating and pumping combination—also with water-tight motor hood.

Class "JL" sump pump to fight the flood or to hasten receding waters.

If your basement is a flood hazard, or space is at a premium, solve at least that one problem by installing Shartle-Dilts vertical agitators and pumps.



(Left) VERTICAL AGI-FLO PUMP
(Right) VERTICAL CLASS "LV" PUMP

AGITATORS AND PUMPS — COMPLETE LINE
BOTH HORIZONTAL AND VERTICAL

SHARTLE BROS. MACHINE CO.
MIDDLETOWN, OHIO

DILTS MACHINE WORKS
FULTON, NEW YORK

B-C INTERNATIONAL, LTD., 16 Catherine Place, Victoria London S-W-1, England

Divisions of:
THE BLACK-CLAWSON COMPANY, HAMILTON, OHIO
Western Sales Office: Mayer Bldg., Portland, Oregon
Associate: ALEXANDER FLECK LIMITED, OTTAWA, CANADA

FOR SALE

BEATERS
1—Iron tub 84x84 Shartle breaker
1—Dilts high speed with roll 56x48

CUTTERS
1—138" Horne duplex with duplex layboy
1—100" Hamblet duplex with duplex layboy
1— 84" Clark single with layboy
1— 94" Clark single with layboy
1— 78" Clark
2— 48" Hamblet

DRYERS

1—12 ft. x 185" Yankee	4—48 x 118"
1—12 ft. x 138" Yankee	2—48 x 166"
2— 8 ft. x 174" Yankee	1—48 x 80"
5— 8 ft x 174"	16—36 x 65"

FOURDRINIER PARTS
1—Wire 50' x 110" anti friction with 18" suction couch and three sets presses, rolls 20 x 166".
1—100" Fourdrinier Part with 30" suction couch, 20" diameter breast roll, 8" diameter table rolls.

JORDANS
1—No. 2 Appleton, anti friction, with 150 HP motor
1—No. 5 Miami, anti friction
1—No. 2 Dillon
3—Noble & Wood Pony

MOULDS
1—38 x 125"
1—60 x 84"
1—48 x 84"
1—86 x 84"

PAPER MACHINE
1—150" trim combination machine
1—94" trim facial tissue and M G machine with 8" dia. Beloit dryer
1—84" Fourdrinier paper machine

PUMPS
2—12 x 12 Gould triplex
1—10 x 20 Shartle duplex
1— 7 x 10 Gould triplex

SCREENS
2—No. 3 Bird
Flat screens, 3 to 16 plate
Leith Walk and Moore & White rotary

SLITTERS
1—234" Rice Barton
1—150" Moore & White four drum
1—150" Warren two drum
1—130" and one 128" Pusey & Jones two drum
1—112" Kidder
1— 42" Langston
1— 50" Cameron
1— 42" 44 W Cameron

SUCTION ROLLS
1—38 x 190" Couch
1—42 x 190" Press
1—25 x 166" Couch
1—18 x 148" Couch
1—18 x 92" Couch

ELECTRIC TRUCKS
1—Baker electric truck, model D T O
1—Walker electric highway truck, 4000 lb. Capacity, Model 42 with generator
1—Automatic tractor and piler

FRANK H. DAVIS CO. 175 Richdale Ave., Cambridge, Mass. TF

FOR SALE

Supercalender—One modern right-hand 94" eleven roll web Norwood stack, speed range 50 feet to 2,000 feet per minute with automatic weighing control capable delivering one ton per lineal inch bottom nip. All rolls equipped with anti-friction bearings. Reliance variable speed drive with MG sets, driven by synchronous motor wound for 3 phase, 60 cycle, 2300 volt. Reply Box 49-158 care Paper Trade Journal. A-7

FOR SALE: N. J. Mounting Machines Models 57 & 58. 44" & 65" Paper Power Cutters; Fuchs & Lang 40" Coater; Beck Sheeters 36" & 55"; No. 3 Miehle 33x46; 22x39 & 70x78 Sheridan Die Cutters; 30" & 40" Slitters & Rewinders; 14x22, 20x30, 26x38 Thomson Die Cutters; No. 10 Babcock Die Cutters 55". Also complete Mounting & Finishing Division with machines like new. Write for listing and prices on these and other Paper Box and Paper Converting Machines. Selling out on pre-moving sale. Address Box 49-121 care Paper Trade Journal. A-28

CHESTNUT WET LAP FOR SALE

8 Air Dry Tons per day of pure chestnut wet lap available for immediate shipment. Write for details and sample.

CHAS. A. SCHIEREN COMPANY
Bristol, Va. TF

FOR SALE

44" & 65" Paper Power Cutters, like new; Coaters; Waxers; Sheeters; Die Cutters; Printers; Slitters & Rewinders. Write for Price Bulletin #155 listing over 70 Paper Converting Machines. Priced exceptionally low.

South Wabash Engineering Co. Inc.
2937 S. Wabash
Chicago, Ill. TF

FOR SALE—52" Slitter-Rewinder manufactured by Cannard. Score-cutter. Rebuilt. Ran day and night until recently when it was replaced by larger machine. Exceptional value at $2,500.00. THE PAPERCRAFT CORPORATION, Paper Square, Pittsburgh, Pennsylvania. TF

PAPER COATING MACHINERY MANUFACTURERS — Waxing, Oiling, Carbon, Laboratory Coating and Treating Machines. New improvement. MAYER MACHINE COMPANY, Inc., 1313 Buffalo Road, Rochester 11, N. Y. TF

FOR SALE—1 Only Camachine 20, Winder, 208" trim width, 212" actual drum face, 42" maximum diameter rewind capacity, etc. If interested write Box 49-184 care Paper Trade Journal. A-14

FOR SALE—One Breaker Beater manufactured by E. D. Jones & Sons Company—new 1940. Roll size 66" diameter 61" face—perforated backfall. Available immediate delivery. Price upon inquiry to Robertson Paper Box Co., Montville, Connecticut. A-28

FOR SALE—62" Beloit Combination 4 Ply Board Paster and 2 Ply Paper Lining Machine. Now running. Address Box 49-180 care Paper Trade Journal. TF

FOR SALE AND REMOVAL: Complete equipment in operating plant for the production of coated and printed paper specialties. Conversion to roll or sheet form. Includes waxer, coater, laminator, printing presses, winder and sheeter, complete with motors. For full particulars and prices address Gibbs-Brower Company, Inc., 21 E. 40th Street, N. Y. A-7

FOR SALE

78" Hamblet Sheeter with Hamblet Layboy and 10 roll backstand. Immediately available. Can be seen in operation. $3,000. Address Box 49-171, care Paper Trade Journal. A-28

CORE PIPE

3" and 4" New Steel Pipe cut to length and slotted per specification.

ALTOONA PIPE & STEEL SUPPLY CO.
Altoona, Pennsylvania
Phone 6151 TF

FOR SALE—2 Garment Bag Machines, complete with AC motors and Reeves drives. Formers to make laundry, millinery and other allied bags. Both machines now in daily production. Address Box 49-178 care Paper Trade Journal. A-21

ONE CECO BOX SEALER, with especially long feed and pressure unit. In excellent condition, subject to prior sale at the very low price of $1,000 f.o.b. Garwood, N. J. The General Cellulose Co., Inc., Garwood, N. J. A-21

REBUILT ELECTRICAL MACHINERY

A.C. & D.C. GENERATORS
1000 amp. 60 volt Westgh. SK Welding Gen.
1—150 KW West. SK 125 v. 1200 RPM.
125 KVA 220/3/60 277 RPM West.
150 KW Triumph 250 v. cp.wd. 600 RPM.
150 KW G.E. 550 v. 1100 RPM cp.wd.
1500 amp. 60 v. West. SK Generator

UNDER M-G SETS—R. CO.
150 KW G.E. 275 v.—710 HP S. n. 2300 v.
250 KW West. SK 250 v.—2300 v. Syn.
150 KW West. 125 v. SK—150 HP Ind.
50 KW 125 v. G.E.—75 HP G.E. 2200 v.
35 KW G.E. 125 v.—50 HP G.E.
10 KW 125 v.—15 HP Mast. 220 440.

AIR COMPRESSORS
755 CFM Chic. Pneu. two stage Belted.
355 cfm 100# Chic. Pneu. 12 x 10 Belted.
270 cfm 100# Chg. Pne. Gas. Portable.
245 cu. ft. Ing. Rand belted ER1
220 cfm 100# Ing. Rd. Gas. Portable.
1—164 cu. ft. Ch. Pneu. Steam Type.

AC MOTORS (3 ph. 60 cy.)

HP	Make	Wdg	Spd.	Type
500	Elect. Mcty.	Syn.	120	
300	G.E.	S.R.	450	I M
300	West.	S.R.	600	CW
200	G.E.	S.R.	585	I M
150	G.E.	Syn.	600	ATI
150	G.E.	S.C.	695	KT362Y
125	West.	Syn.	277	
120	Cr. Wh.	S.R.	290	
100	G.E.	S.R.	450	I M
100	Al.Ch.	S.R.	580	
75	G.E.	S.R.	600	I M
50	G.E.	S.C.	865	I K
50	A.C.	S.C.	1750	
40	G.E.	S.C.	860	KT
35	G.E.	S.C.	1150	I K
30	Vert. G.E.	S.C.	1150	KT526
30	G.E.	S.C.	1200	KG 405
25	C.Wh.	S.C.	600	SC504
25	500 v. West.	S.C.	1750	CS365
25	Cr.Wh.	S.C.	865	
25	Cr.Wh.	S.R.	580	1210
15	West	S.C.	1750	CS326
15	L.A.	S.C.	3600	Fr. 324

HP	Make	Wdg	Spd.	Type
10	West.	S.C.	570	CS566C
10	West.	S.C.	870	CS464C
10(6)	West.	S.C.	1200	CS370C
7½	Comm.	S.C.	865	P126
7½	West.	S.C.	3440	CS254Y
5	West.	S.C.	585	CS546
5	West.	S.C.	1750	254
5(2)	West.	S.C.	1200	CS
5/11½	L.A.	S.C.	500/1600	2558
3	Master	S.C.	1125/37	PA
3	Burke	S.C.	420	EM2
3	West.	S.C.	1100	CS
3	West.	S.C.	1750	
2	West.	S.C.	600/1200	CS324
2	350v West.	S.C.	1750	CS224
2	Imo.	S.C.	480	

AC MAGNETIC STARTERS (3 ph. 60 cy.)
2—700 HP West. 2300 v. Syn. Line Starters.

MONORAIL HOISTS
2—½ Ton Conco 220/3/60
1—1½ Ton Reading 220/3/60
1—2 Ton Link Belt 220/3/60

MOORHEAD ELECTRICAL MACHINERY CO. **Pittsburgh 19, Pa. • Mayflower 7900**

FOR SALE

POWER REAM CUTTERS

New 44" National Automatic Clamp Power Cutters, with A.C. motors — carried in stock, ready immediate shipment.

Also specializing in the NEW 57" National Hydraulic—just out. Send for illustrated circular on this wonderful smooth running machine. Not a single gear on it.

THOMAS W. HALL COMPANY, INC.
Stamford, Conn.
(N. Y. Sales Office: 120 West 42nd St.)
Also rebuilt Shearers, Slitters, and Rewinders.

FOR SALE

FOR SALE

Roll Pasting Equipment for 62" machine, including paste mixing tanks, pump, applicator laminating rolls, dryers, gears, steam joints, etc. For further information, write to Box 49-128, Paper Trade Journal. A-7

WANTED

WANTED—W & P Shredders, Evaporators, Generators and Boilers, Slitters, Cutters, Hydraulic presses, Sheridan Presses, Dryers. Address Box 48-223 care Paper Trade Journal. TF

WANTED

WANTED
COMPLETE CYLINDER MACHINE
TO TRIM APPROXIMATELY
90 INCHES BOARD.

Principals only.
Address Box 49-167, care Paper Trade Journal. A-7

WANTED—Brightwood Box Machine. Address Box 48-224 care Paper Trade Journal. TF

PAPER MANUFACTURER desire to purchase or invest in converting business of standard paper products. Address Box 48-222 care Paper Trade Journal. TF

FOR SALE

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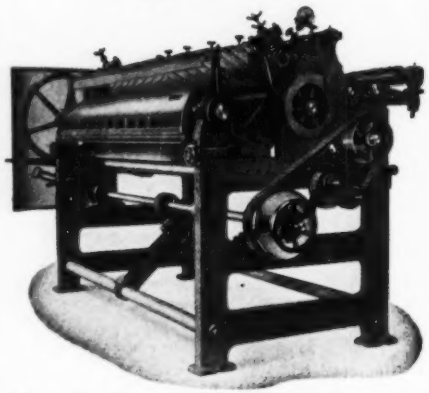

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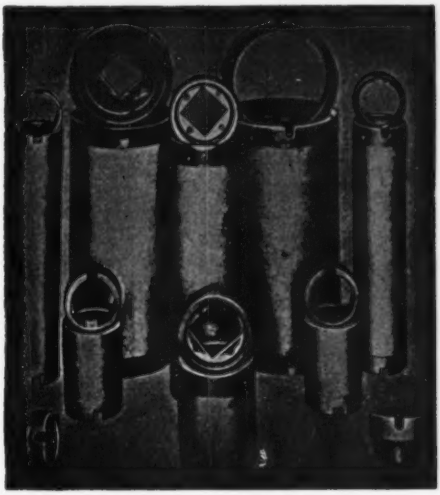

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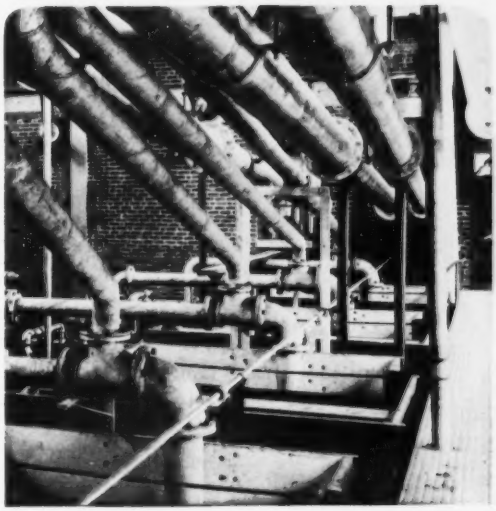

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Shuler & Benninghofen
Waterbury Felt Co.
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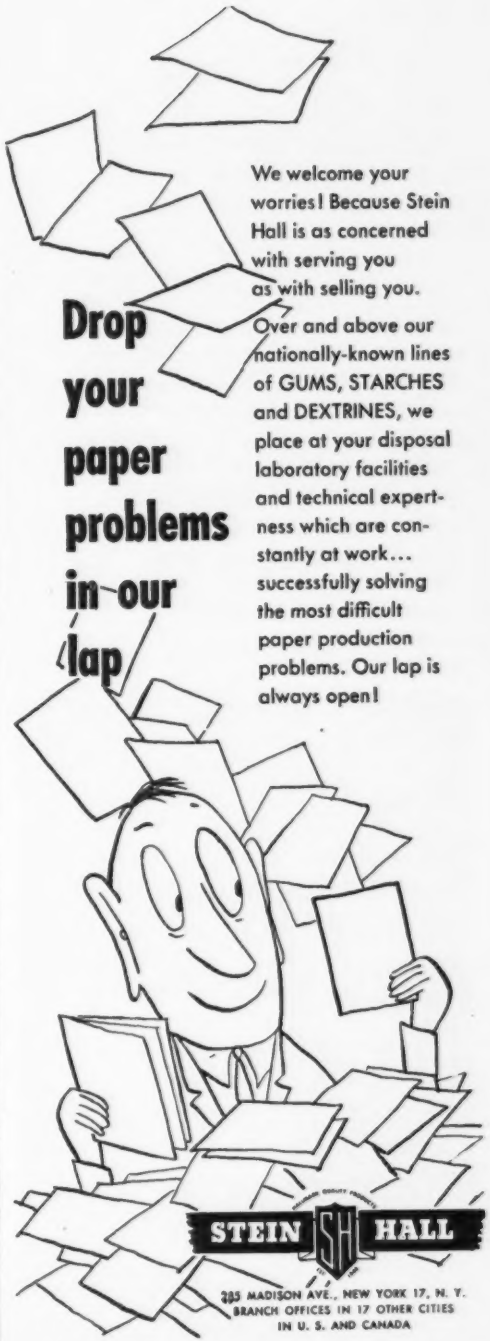
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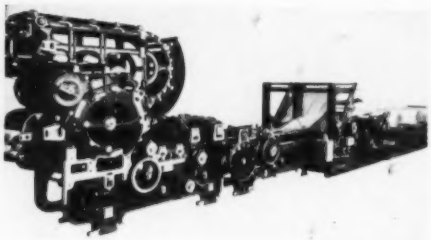

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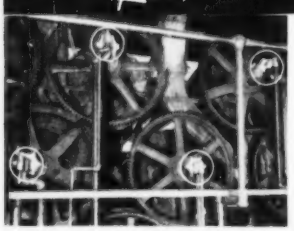

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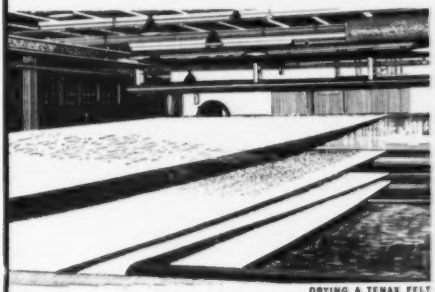

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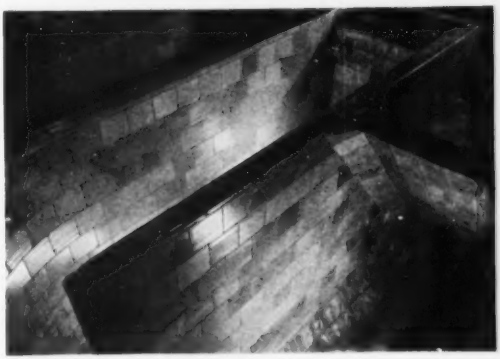

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The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Valley Iron Works Co.

Titanium
E. I. du Pont de Nemours & Co.
Titanium Pigment Co.
R. T. Vanderbilt Co.
Witco Chemical Company

Tools
Ingersoll-Rand Co.
The Stanley Works
Walworth Company

Tractors & Trucks
Towmotor Corp.
Clark Equipt. Co., Clark Tractor Div.

Transmissions
Link Belt Company

Traps
Armstrong Machine Works
Cochrane Corp.
Crane Co.
Johnson Corporation
Shartle Bros. Mch. Co.
Stickle Steam Specialties Co.

Tubes
Babcock & Wilcox Co.
National Tube Co.

Tubing, Mechanical
National Tube Co.

Tubs
Rodney Hunt Machine Co.
Shartle Brothers
Valley Iron Works Co.

Turbines
Allis-Chalmers Mfg. Co.
De Laval Steam Turbine Co.
General Electric Company
Hunt, Rodney, Mach. Co.

Turpentine Recovery
Foster Wheeler Corp.

Used Equipment
Frank H. Davis Company
Gibbs-Brower Co.
Thomas W. Hall Co.
J. J. Ross Company
Ross Paper Machy. Corp.
Shartle Brothers Machine Co.
Suburban Machine Co.

Valves
Askania Regulator Co.
The Bristol Company
The Brown Instrument Co.
Cochrane Corp.
Crane Company
Dilts Machine Works
The Foxboro Company
E. D. Jones & Sons Co.
Magnus Metal Corp.
D. J. Murray Mfg. Co.
William Powell Co.
Record Fdy. & Mch. Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Stickle Steam Specialties Co.
Taylor Instrument Companies
Trimbey Mach. Wks.
Valley Iron Works Co.
Walworth Company

Washers
Bird Machine Company
Downingtown Mfg. Co.
Gibbs-Brower Company, Inc.
E. D. Jones & Sons Co.
Moore & White Co.
Oliver United Filters
The Sandy Hill Iron & Brass Works
Rodney Hunt Machine Co.
Shartle Brothers Machine Co.
Valley Iron Works Co.

Waste Treating Equipment
Alhydro, Inc.
The Dorr Company

Water Conditioning
Alhydro, Inc.
Calgon, Inc.
Cochrane Corp.
General Dyestuff Corp.
National Aluminate Corp.

Water Dispersions
Alhydro, Inc.
American Anode, Inc.
Rohm & Haas Co., Resinous Products Div.

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Hercules Powder Co.

Waxing Machinery
Black-Clawson Co.
Dilts Machine Works
Frank W. Egan & Co.
Gibbs-Brower Company, Inc.
The Mayer Machine Co.
Potdevin Machine Co.
Shartle Brothers Machine Co.
Waldron Corp., John
Weber, Herman G.

Welding Equipment
Allis-Chalmers Mfg. Co.
General Electric Company
Walworth Company

Wet Machines
Black-Clawson Co.
Carthage Machine Co.
Downingtown Mfg. Co.
Gibbs-Brower Company, Inc.
Moore & White Co.
Pusey & Jones Company
J. J. Ross Company
Ross Paper Machy. Corp.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Smith & Winchester Mfg. Co.
Valley Iron Works Co.

Wetting Agents
American Cyanamid Company, Industrial Chemicals Division
Adell Chemical Company
General Dyestuff Corp.
Hercules Powder Co.
Monsanto Chemical Company
Nopco Chemical Co.
Rohm & Haas Co.
Wyandotte Chemicals Corp.

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Davis Engineering Corp.

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The Appleton Machine Co.
Black-Clawson Company
Cameron Machine Co.
Dietz Machine Works
Downingtown Mfg. Co.
Frank W. Egan & Co.
Gibbs-Brower Company, Inc.
Thomas W. Hall Co.
Hudson-Sharp Mach. Co.
Langston Co., Samuel M.
Machinery & Prod. Engrg. Corp.
Moore & White Co.
Paper Converting Mch. Co.
Potdevin Machine Co.
Pusey & Jones Corp.
J. J. Ross Company
Ross Paper Machy. Corp.
The Sandy Hill Iron & Brass Works
Smith & Winchester Mfg. Co.
Suburban Machine Co.
Waldron Corp., John

Wire Brushes
M. W. Jenkins Sons Inc.

Wires
Appleton Wire Works
Bulkley, Dunton Pulp Co., Inc.
International Wire Works
Lindsay Wire Weaving Co.
Williams-Gray Co.

Wire Brushes
Williams-Gray Co.

Wood Splitters
The Appleton Machine Co.
Carthage Machine Co.

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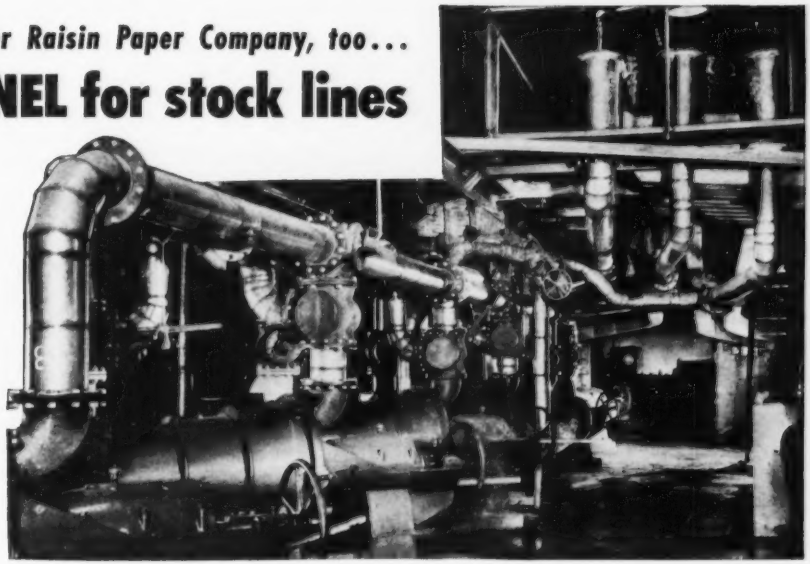

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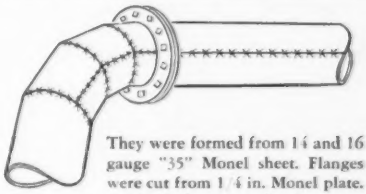

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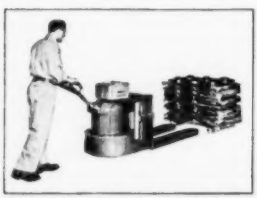

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